

**SONY**

---

リモートコントロールパネル

REMOTE CONTROL PANEL

**RCP-TX7**

ラックマウントブラケット

RACK MOUNT BRACKET

**RMM-TXR7**

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**SERVICE MANUAL**

Vol. 2 (1st Edition)

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## このマニュアルについて MANUAL STRUCTURE

### 本書の目的

本書はリモートコントロールパネルRCP-TX7のサービスマニュアルVOL.2です。  
本書では、半導体、パーツリスト、ブロックダイヤグラム、マウント図、回路図を記載しています。

### 関連マニュアル

この「サービスマニュアルVOL.2」の他に、下記のマニュアルが用意されています。

- **サービスマニュアル Vol.1**

部品番号：9-977-291-11

本機の取り扱い、設置、部品の交換方法などに関する情報を記載しています。

### Purpose of this manual

This manual is the Service Manual Vol. 2 of the REMOTE CONTROL PANEL RCP-TX7.

This manual contains the semiconductor pin assignments, parts lists, block diagrams, board illustrations and schematic diagrams.

### Related manuals

In addition to this Service Manual Vol. 2, the following manual is provided.

- **Service Manual Vol. 1**

Part No. 9-977-288-11

Contains the operation manual related to the operations of this equipment, the replacement of the parts.

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## SECTION 4

### SEMICONDUCTOR PIN ASSIGNMENTS

ここに記載されている半導体は、それぞれの機能を等価的に表したものです。なお、互換性のない型名を併記していることがありますので、部品を交換するときは、Spare Partsの章を参照してください。  
等価回路はICメーカーのデータブックに従いました。

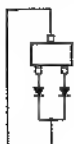
Semiconductors of which functions are equivalent are described here. For parts replacement, refer to the section of Spare Parts in this manual. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

DIODE	Page	TRANSISTOR	Page	LED	Page	IC	Page
1S2837-T1 .....	4-2	2SA1162G .....	4-2	GL3ED8 .....	4-2	HD6435368AW34F .....	4-4
1SS184 .....	4-2	2SA1213Y-TE12L .....	4-2			HD6473308RF10 .....	4-3
		2SA812-T1M6 .....	4-2	LB-202ML .....	4-2		
EA30QS04-F .....	4-2	2SB798-DL .....	4-2			LC3564SM-10-TLM .....	4-6
EA30QS04-F-TE16F2 .....	4-2	2SC1623 .....	4-2	MPG3371X-150 .....	4-2	LM358D .....	4-5
		2SC1623-T1L6 .....	4-2			LM358DR-E2 .....	4-5
RB411D .....	4-2	2SC2873Y-TE12L .....	4-2				
RB411D-T146 .....	4-2	2SD1623-S .....	4-2			M27C512-10F1 .....	4-6
		2SD596-DV5 .....	4-2			MAX202CSE .....	4-5
		2SD596-T1DV5 .....	4-2			MAX202CSE-TE2 .....	4-5
		DTC114YK .....	4-2			S-8054HN-CB-S .....	4-7
						S-8054HN-CB-T1 .....	4-7
		UN2214-TX .....	4-2			SN74HC00ANS .....	4-7
						SN74HC00ANS-E05 .....	4-7
						SN74HC04ANS .....	4-7
						SN74HC04ANS-E05 .....	4-7
						SN74HC11ANS .....	4-7
						SN74HC11ANS-E05 .....	4-7
						SN74HC164ANS .....	4-7
						SN74HC164ANS-E05 .....	4-7
						SN74HC32ANS .....	4-7
						SN74HC32ANS-E05 .....	4-7
						SN74HC595ANS .....	4-8
						SN74HC595ANS-E05 .....	4-8
						SN74HC74ANS .....	4-8
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						TL1451ACNS .....	4-8
						TL1451ACNS-E05 .....	4-8
						X24164SIC7000 .....	4-8

# DIODE, TRANSISTOR, LED

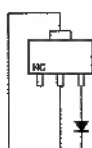
## DIODE

-TOP VIEW-



1S2837-T1  
1SS184

-TOP VIEW-



EA30QS04-F  
EA30QS04-F-TE16F2

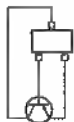
-TOP VIEW-



RB411D  
RB411D-T146

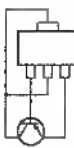
## TRANSISTOR

-TOP VIEW-



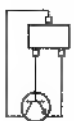
2SA1162G  
2SA812-T1M6

-TOP VIEW-



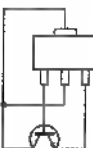
2SA1213Y-TE12L  
2SB798-DL

-TOP VIEW-



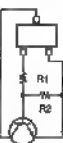
2SC1623  
2SC1623-T1L6  
2SD596-DV5  
2SD596-T1DV5

-TOP VIEW-



2SC2873Y-TE12L  
2SD1623-S

-TOP VIEW-



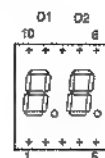
DTC114YK(R1=10K,R2=47K)  
UN2214-TX

## LED

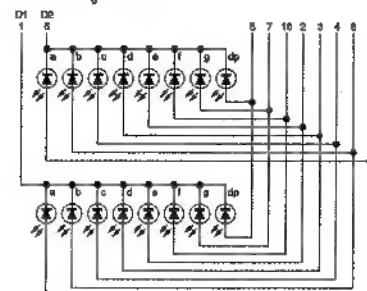


GL3ED8;A=RED,B=YELGRN

-TOP VIEW-



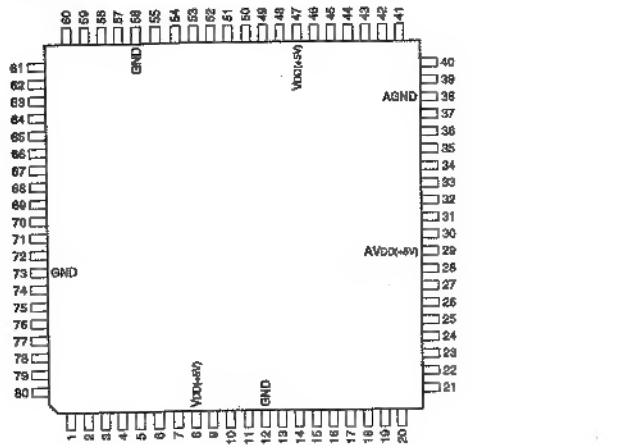
LB-202ML ;GREEN



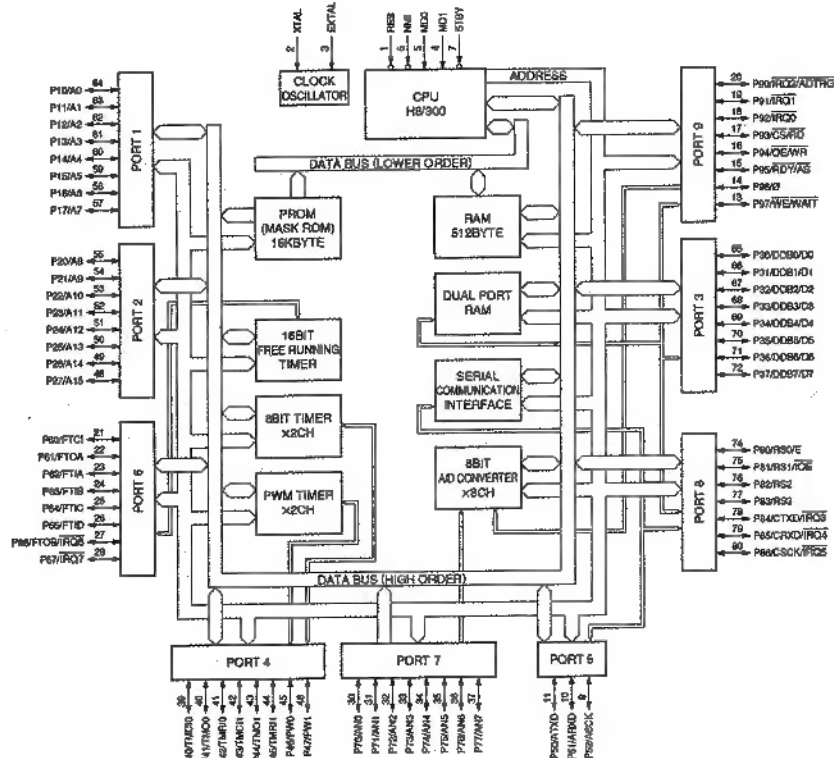
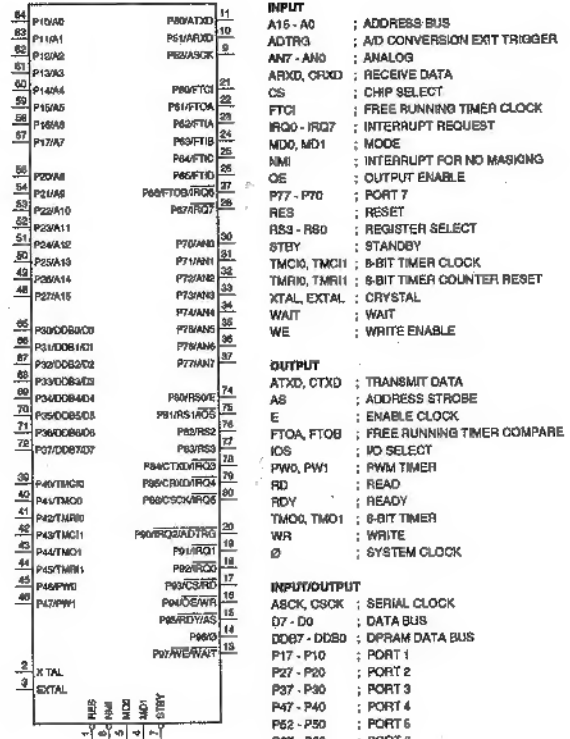
MPG3371X-150 ;GREEN

IC

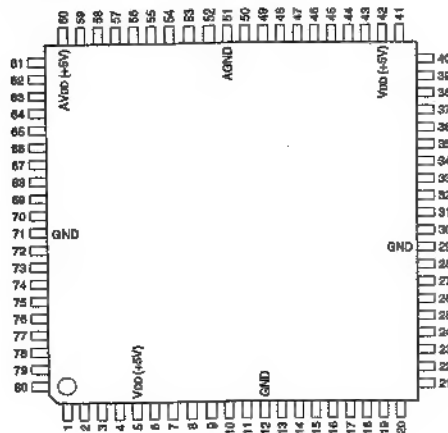
## HD6473308RF10 (HITACHI)

C-MOS 8-BIT SINGLE CHIP MICROCOMPUTER  
-TOP VIEW-

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I	RES	21	I/O	P60/FTCI	41	I/O	P42/TMRIO	61	I/O	P13/A3
2	I	XTAL	22	I/O	P61/FTQA	42	I/O	P43/TMCI1	62	I/O	P12/A2
3	I	EXTAL	23	I/O	P62/FTIA	43	I/O	P44/TMCI1	63	I/O	P11/A1
4	I	MD1	24	I/O	P63/FTIB	44	I/O	P45/TMRI1	64	I/O	P10/A0
5	I	MD0	25	I/O	P64/FTIC	45	I/O	P46/PW0	65	I/O	P30/DOB0/D0
6	I	NMI	26	I/O	P65/FTID	46	I/O	P47/PW1	66	I/O	P31/DOB1/D1
7	I	STBY	27	I/O	P66/FTOB/IRQ8	47	I/O	VDD	67	I/O	P32/DOB2/D2
8	I	VDD	28	I/O	P67/IRQ7	48	I/O	P27/A15	68	I/O	P33/DOB3/D3
9	I/O	P52/ASCK	29	I	AVDD	49	I/O	P26/A14	69	I/O	P34/DOB4/D4
10	I/O	P51/ARXD	30	I	P70/AN0	50	I/O	P25/A13	70	I/O	P35/DOB5/D5
11	I/O	P50/ATXD	31	I	P71/AN1	51	I/O	P24/A12	71	I/O	P36/DOB6/D6
12	I	GND	32	I	P72/AN2	52	I/O	P23/A11	72	I/O	P37/DOB7/D7
13	I/O	P97/WE/WAIT	33	I	P73/AN3	53	I/O	P22/A10	73	I	GND
14	I/O	P96/R	34	I	P74/AN4	54	I/O	P21/A9	74	I/O	P80/RS0/E
15	I/O	P95/RDY/AS	35	I	P75/AN5	55	I/O	P20/A8	75	I/O	P81/RS1/OS
16	I/O	P94/CE/WR	36	I	P76/AN6	56	I	GND	76	I/O	P82/RS2
17	I/O	P93/CS/RD	37	I	P77/AN7	57	I/O	P17/A7	77	I/O	P83/RS3
18	I/O	P92/IRQ0	38	I	AGND	58	I/O	P16/A6	78	I/O	P84/CTXD/IRQ3
19	I/O	P91/IRQ1	39	I/O	P40/TMCI0	59	I/O	P15/A5	79	I/O	P85/CRXD/IRQ4
20	I/O	P90/ADTRG/IRQ2	40	I/O	P41/TMCI0	60	I/O	P14/A4	80	I/O	P86/CSCK/IRQ5

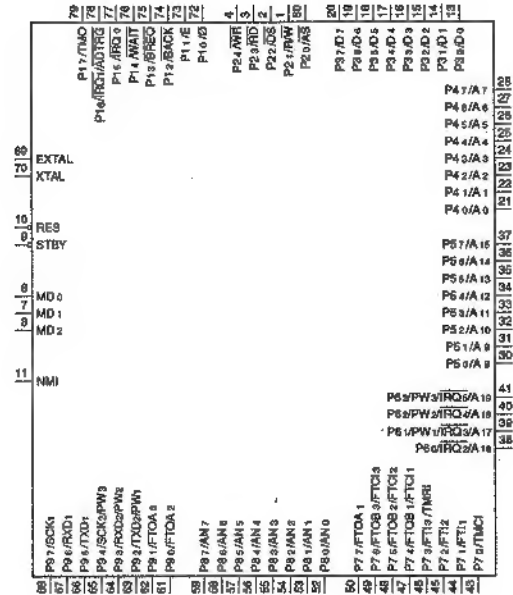


## HD6435368AW34F (HITACHI)

C-MOS 16-BIT MICRO COMPUTER UNIT  
-TOP VIEW-

(AVDD, VDD=+5V)

PIN No.	IO	SIGNAL	PIN No.	IO	SIGNAL
1	IO	P21/R/W	41	IO	P63/PW3/RQ3/A19
2	IO	P22/DS	42	-	VDD
3	IO	P23/RD	43	IO	P73/TMC1
4	IO	P24/WR	44	IO	P71/FT1
5	-	VDD	45	IO	P73/FT2
6	I	MD0	46	IO	P73/FT3/TMR1
7	I	MD1	47	IO	P74/FTOB1/FTC1
8	I	MD2	48	IO	P75/FTOB2/FTC2
9	I	STBY	49	IO	P76/FTOB3/FTC3
10	IO	RES	50	IO	P77/FTOA1
11	I	NMI	51	-	AGND
12	-	GND	52	I	P80/AN0
13	IO	P30/D0	53	I	P81/AN1
14	IO	P31/D1	54	I	P82/AN2
15	IO	P32/D2	55	I	P83/AN3
16	IO	P33/D3	56	I	P84/AN4
17	IO	P34/D4	57	I	P85/AN5
18	IO	P35/D5	58	I	P86/AN6
19	IO	P36/D6	59	I	P87/AN7
20	IO	P37/D7	60	-	AVDD
21	IO	P40/A0	61	IO	P90/FTOA2
22	IO	P41/A1	62	IO	P91/FTOA3
23	IO	P42/A2	63	IO	P92/TXD2/PW1
24	IO	P43/A3	64	IO	P93/RXD2/PW2
25	IO	P44/A4	65	IO	P94/SCK2/PW3
26	IO	P45/A5	66	IO	P95/TXD1
27	IO	P46/A6	67	IO	P96/RXD1
28	IO	P47/A7	68	IO	P97/SCK1
29	-	GND	69	I	EXTAL
30	IO	P50/A8	70	I	XTAL
31	IO	P51/A9	71	-	GND
32	IO	P52/A10	72	IO	P10/D
33	IO	P53/A11	73	IO	P11/E
34	IO	P54/A12	74	IO	P12/BACK
35	IO	P55/A13	75	IO	P13/BREQ
36	IO	P56/A14	76	IO	P14/WAIT
37	IO	P57/A15	77	IO	P15/IRQ3
38	IO	P60/IRQ2/A16	78	IO	P16/IRQ1/ADTRG
39	IO	P61/PW1/IRQ3/A17	79	IO	P17/TMO
40	IO	P62/PW2/IRQ4/A18	80	IO	P20/AS

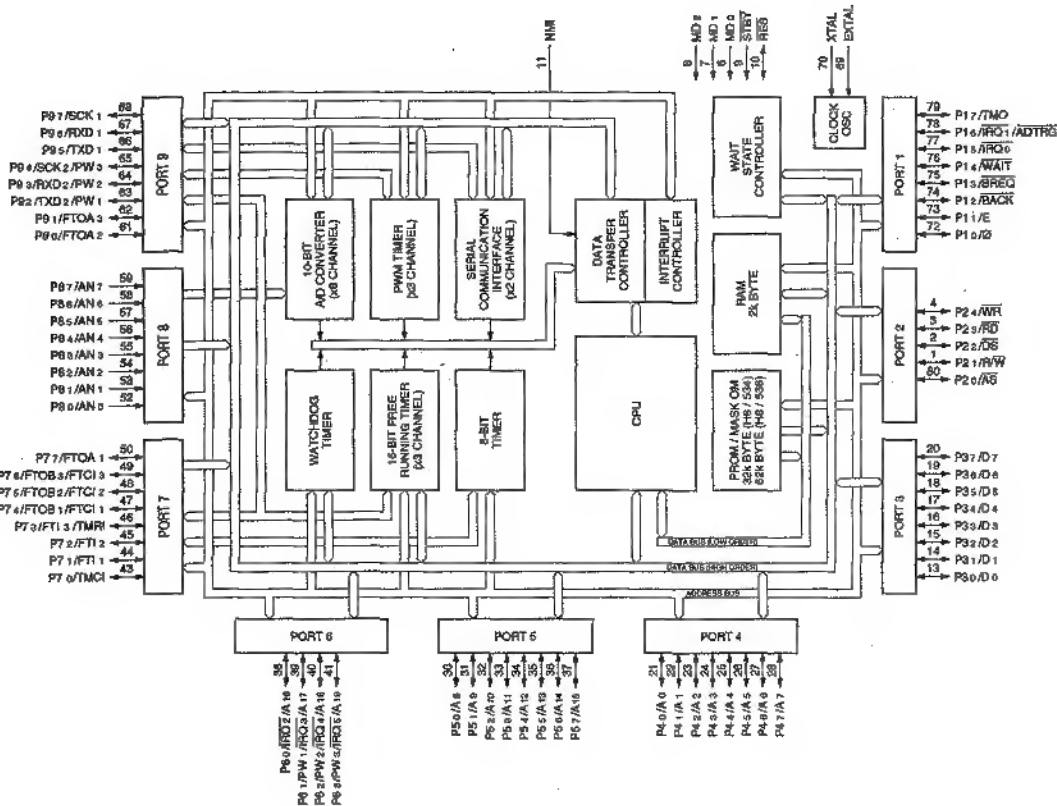


**INPUT**  
 ADTRG : EXTERNAL TRIGGER  
 AN0-AN7 : ANALOG DATA  
 BREQ : BUS REQUEST  
 EXTAL : CONNECTED TO CRYSTAL OSCILLATOR  
 FTC1-FTC3 : FRT COUNTER CLOCK (CHANNEL 1 TO 3)  
 FT1-FT3 : FRT INPUT CAPTURE (CHANNEL 1 TO 3)  
 IRQ0-IRQ5 : INTERRUPTION REQUEST  
 MD0-MD2 : MODE SETTING  
 NMI : NON MASKABLE INTERRUPTION  
 P0-P7 : PORT 0  
 RXD1,2 : RECEIVE DATA  
 STBY : STANDBY  
 TMC1 : 8-BIT TIMER CLOCK  
 TMR1 : 8-BIT TIMER COUNTER RESET  
 WAIT : WAIT  
 XTAL : CONNECTED TO CRYSTAL OSCILLATOR

**OUTPUT**  
 A0-A19 : ADDRESS BUS  
 AS : ADDRESS STROBE  
 BACK : BUS REQUEST ACKNOWLEDGE  
 DS : DATA STROBE  
 E : ENABLE CLOCK  
 FTOA1-FTOA3 : FRT OUTPUT COMPARE A (CHANNEL 1 TO 3)  
 FTOB1-FTOB3 : FRT OUTPUT COMPARE B (CHANNEL 1 TO 3)  
 PW1-PW3 : PWM TIMER (CHANNEL 1 TO 3)  
 R/W : READ/WRITE  
 RD : READ  
 TMO : 8-BIT TIMER  
 TXD1,2 : SEND DATA  
 WR : WRITE  
 Ø : SYSTEM CLOCK

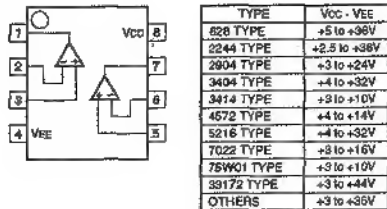
**INPUT/OUTPUT**  
 D0-D7 : DATA BUS  
 RES : RESET  
 P10-P17 : PORT 1  
 P20-P27 : PORT 2  
 P30-P37 : PORT 3  
 P40-P47 : PORT 4  
 P50-P57 : PORT 5  
 P60-P67 : PORT 6  
 P70-P77 : PORT 7  
 P80-P87 : PORT 8  
 SCK1,2 : SERIAL CLOCK





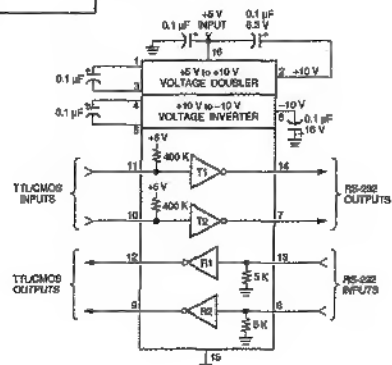
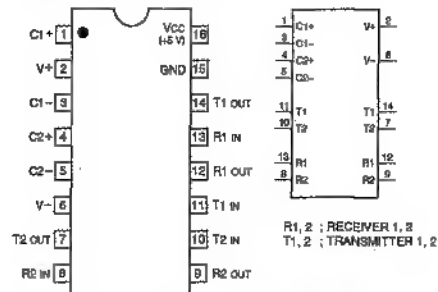
# LM358D (TI) FLAT PACKAGE LM358DR-E2

DUAL OPERATIONAL AMPLIFIERS  
(SINGLE-SUPPLY TYPE)  
—TOP VIEW—

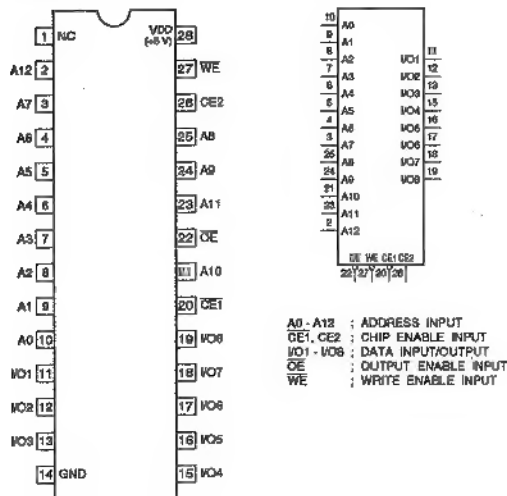


# MAX202CSE (MAXIM) MAX202CSE-TE2

RS-232 TRANSMITTER/RECEIVER  
—TOP VIEW—

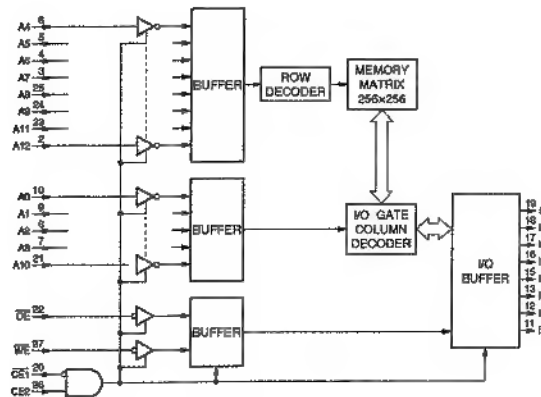


## LC3564SM-10-TLM (SANYO)

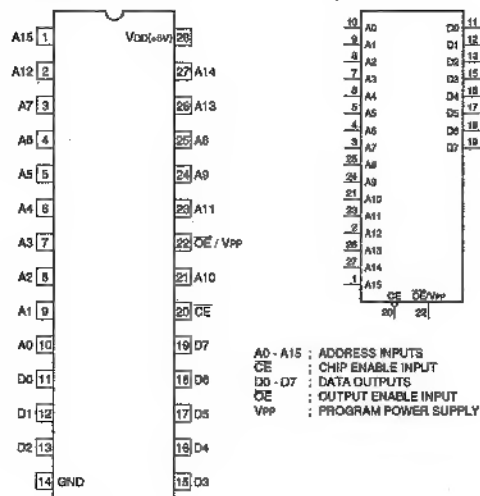
C-MOS 64k (8192 x 8)-BIT STATIC RAM  
-TOP VIEW-

CE1	CE2	OE	WE	MODE	IO TERMINAL
1	X	X	X	NOT SELECT	HIGH IMPEDANCE
X	0	X	X	NOT SELECT	HIGH IMPEDANCE
0	1	1	1	OUTPUT DISABLE	HIGH IMPEDANCE
0	1	0	?	READ	OUTPUT DATA
0	1	X	0	WRITE	INPUT DATA

0 : LOW LEVEL  
1 : HIGH LEVEL  
X : DON'T CARE

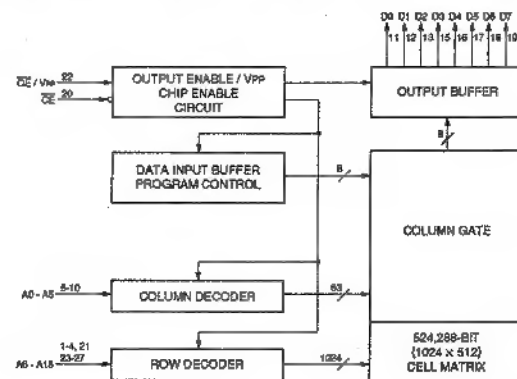


## M27C512-10F1

C-MOS 512K (65,536 x 8)-BIT ERASABLE PROM  
-TOP VIEW-

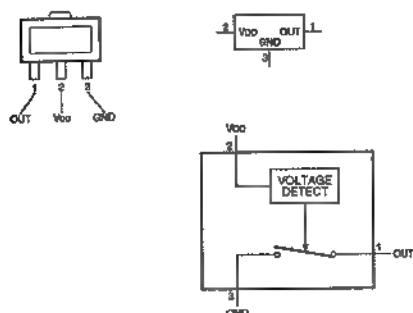
A <sub>n</sub>	CE	OE/VPP	VDD	D <sub>n</sub>	FUNCTION
A <sub>15</sub>	0	0	+5V	Dout	READ
A <sub>15</sub>	0	1	+5V	Hi-Z	OUTPUT DISABLE
X	1	X	+5V	Hi-Z	STANDBY
A <sub>15</sub>	0	+12.5V	+6V	Din	PGM
A <sub>15</sub>	0	0	+6V	Dout	PGM VERIFY
X	1	+12.5V	+6V	Hi-Z	PGM INH

0 : LOW LEVEL  
1 : HIGH LEVEL  
X : DON'T CARE  
Hi-Z : HIGH IMPEDANCE



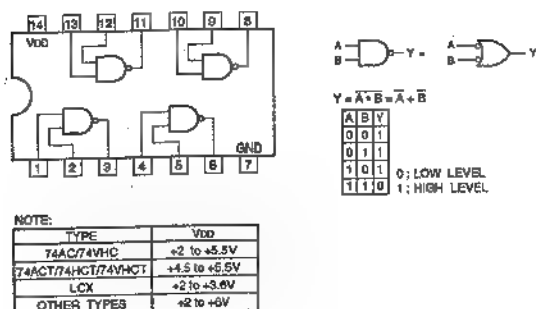
S-8054HN-CB-S (SEIKO I AND E)  
S-8054HN-CB-T1

C-MOS VOLTAGE DETECTOR WITH N-CHANNEL OPEN DRAIN OUTPUT  
-TOP VIEW-



SN74HC00ANS (TI) FLAT PACKAGE  
SN74HC00ANS-E05

C-MOS QUAD 2-INPUT NAND GATES  
-TOP VIEW-

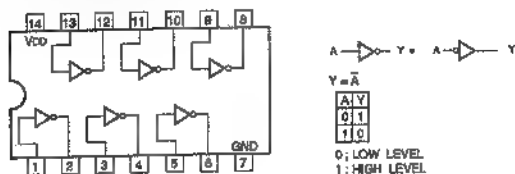


NOTE:

TYPE	VDD
74AC/74VHC	+2 to +5.5V
74ACT/74VHCT/74VHCT	+4.5 to +5.5V
LCX	+2 to +3.6V
OTHER TYPES	+2 to +6V

SN74HC04ANS (TI) FLAT PACKAGE  
SN74HC04ANS-E05

C-MOS HEX INVERTERS  
-TOP VIEW-

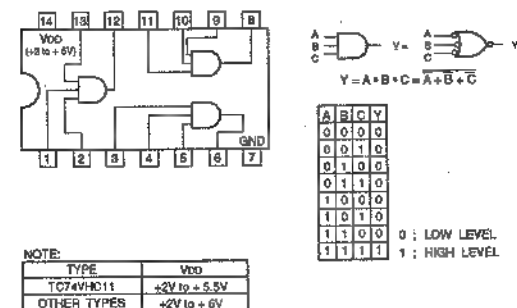


NOTE:

TYPE	VDD
74AC/74VHC/74VHCT	+2 to +5.5V
74ACT/74VHCT	+4.5 to +5.5V
74LCX	+2 to +3.6V
OTHER TYPE	+2 to +6V

SN74HC11ANS (TI) FLAT PACKAGE  
SN74HC11ANS-E05

C-MOS 3-INPUT POSITIVE-AND GATE  
-TOP VIEW-

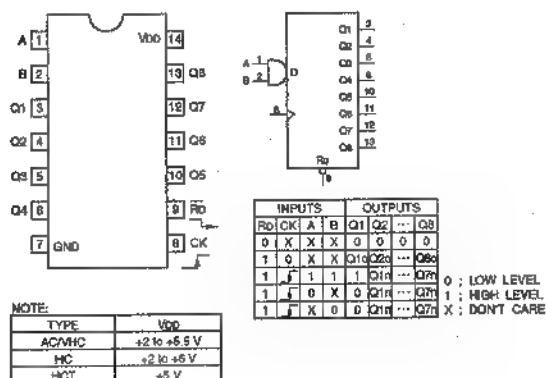


NOTE:

TYPE	VDD
TC74VHC11	+2V to +5.5V
OTHER TYPES	+2V to +6V

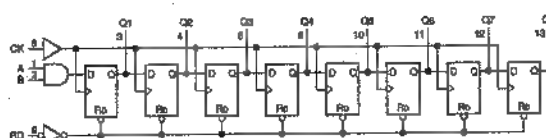
SN74HC164ANS (TI) FLAT PACKAGE  
SN74HC164ANS-E05

C-MOS 8-BIT SERIAL-IN/PARALLEL-OUT SHIFT REGISTER  
-TOP VIEW-



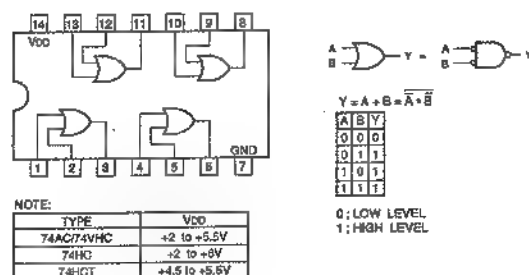
NOTE:

TYPE	VDD
AC/VHC	+2 to +5.5V
HC	+2 to +6V
HCT	+5V



SN74HC32ANS (TI) FLAT PACKAGE  
SN74HC32ANS-E05

C-MOS QUAD 2-INPUT OR GATES  
-TOP VIEW-

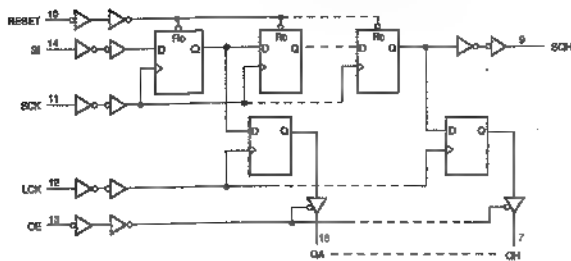
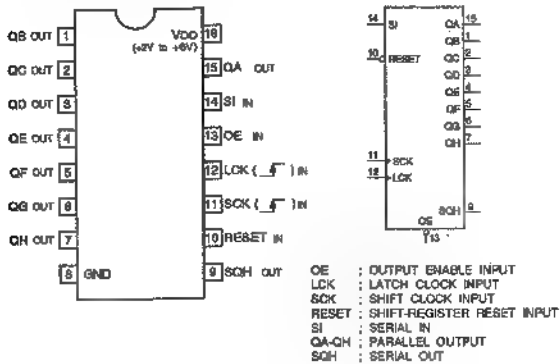


NOTE:

TYPE	VDD
74AC/74VHC	+2 to +5.5V
74HC	+2 to +6V
74VHCT	+4.5 to +5.5V

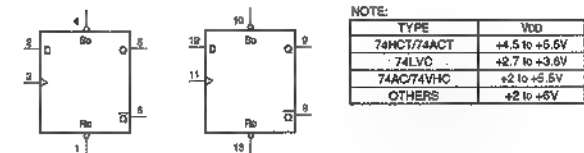
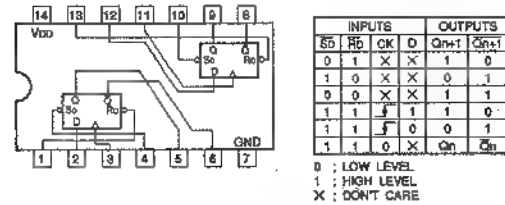
### SN74HC595ANS (TI) FLAT PACKAGE SN74HC595ANS-E05

C-MOS 8-BIT SERIAL-INPUT/SERIAL- OR PARALLEL-OUTPUT  
SHIFT REGISTER WITH LATCHED 3-STATE OUTPUT  
-TOP VIEW-



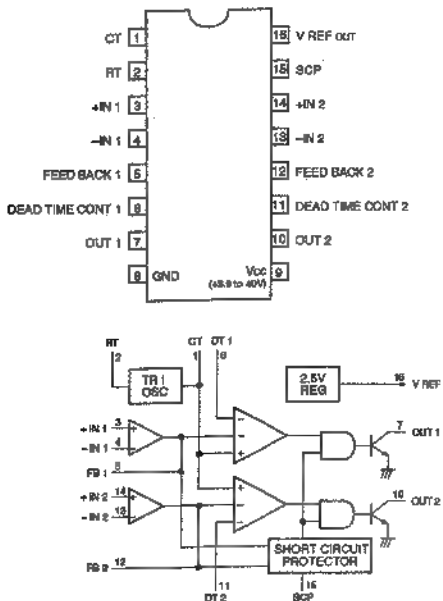
### SN74HC74ANS (TI) FLAT PACKAGE SN74HC74ANS-E05

C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET  
-TOP VIEW-



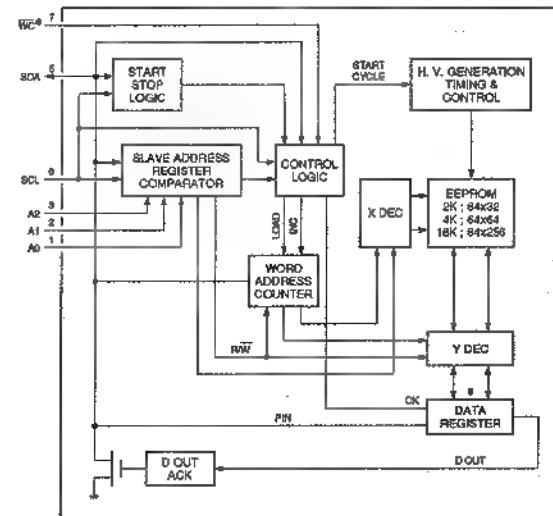
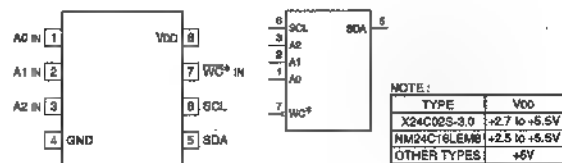
### TL1451ACNS (TI) FLAT PACKAGE TL1451ACNS-E05

DUAL PWM POWER CONTROLLER  
-TOP VIEW-



### X24164SIC7000 (XICOR) (16K BIT) FLAT PACKAGE

C-MOS SERIAL EEPROM  
-TOP VIEW-



\*: TEST (at X24164SIC7000)  
NC (at NM24C16LEMB)

## SECTION 5 SPARE PARTS

### 5-1. NOTES ON SPARE PARTS

#### (1) Safety Related Components Warning

Components marked  $\Delta$  are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

#### (2) Standardization of Parts

Repair parts supplied from Sony Parts Center may not be always identical with the parts which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".

This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present"

#### (3) Stock of Parts

Parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

#### (4) Units for Capacitors, Inductors and Resistors

The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified.

Capacitors :  $\mu\text{F}$   
Inductors :  $\mu\text{H}$   
Resistors :  $\Omega$

### 5-1. 補修用部品注意事項

#### (1) 安全重要部品

##### $\Delta$ 警告

$\Delta$ 印のついた部品は安全性を維持するために重要な部品です。したがって、交換する時は必ず指定の部品を使ってください。

#### (2) 部品の共通化

ソニーから供給される部品は、セットに実装されているものと異なることがあります。これは部品の共通化、改良等によるものです。

分解図や電気部品表には現時点での共通化された部品が記載されています。

#### (3) 部品の在庫

部品表のSP (Supply code) 欄にoで示される部品は交換頻度が低い部品ですので在庫していないことがあり、納期が長くなることがあります。

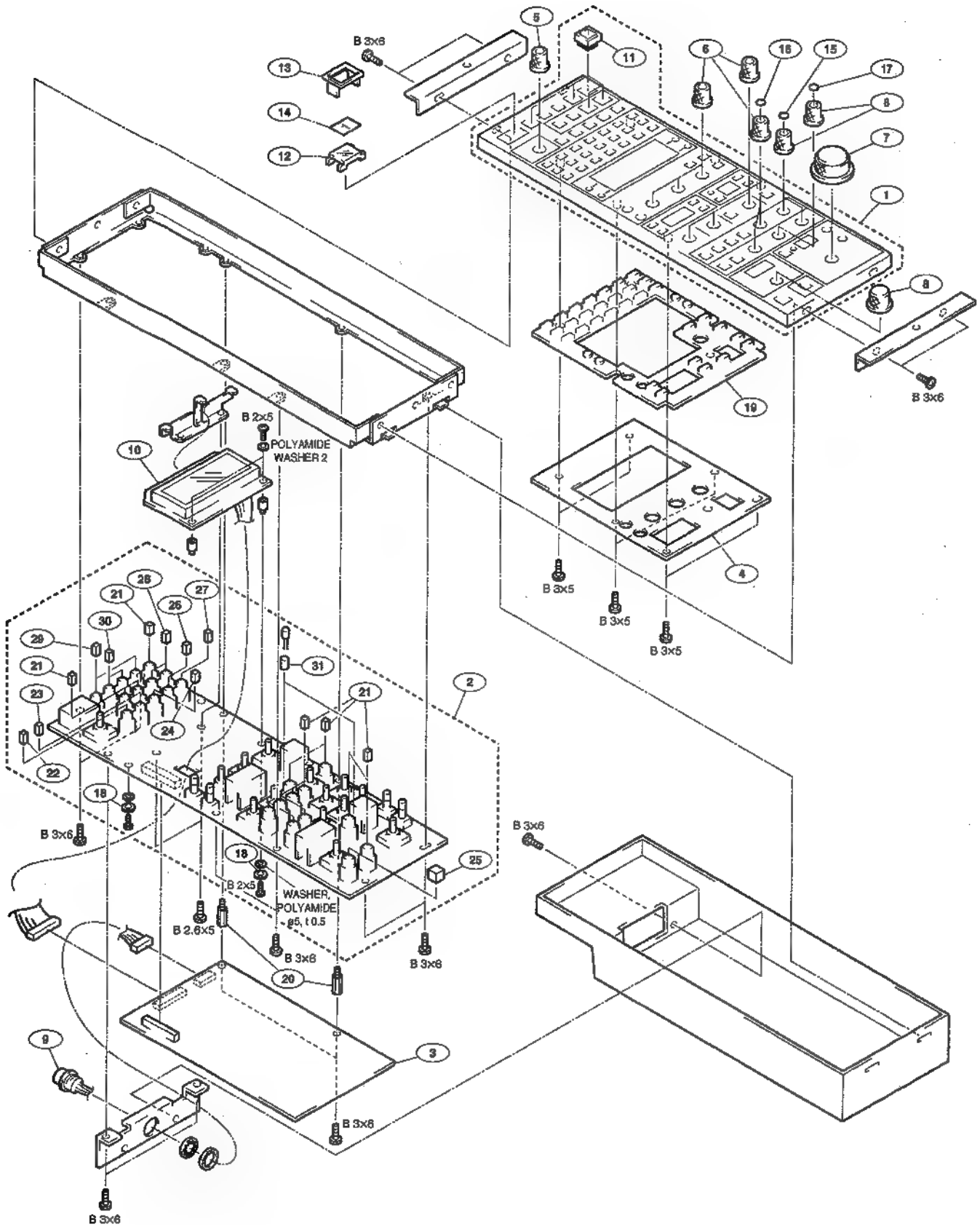
#### (4) コンデンサー、インダクター、抵抗の単位

回路図、分解図、電気部品表中、特に明記したものを除き、下記の単位は省略されています。

コンデンサー :  $\mu\text{F}$   
インダクター :  $\mu\text{H}$   
抵抗 :  $\Omega$



## 5-2. EXPLODED VIEW



No.	Part No.	SP Description
1	A-8278-601-A	■ RCP PANEL ASSY
2	A-8315-093-A	○ MOUNTED CIRCUIT BOARD, CT-192
3	A-8315-095-A	○ MOUNTED CIRCUIT BOARD, CPU-245
4	A-8315-097-A	○ MOUNTED CIRCUIT BOARD, SW-890
5	X-3679-298-1	s KNOB, VOLUME ASSY
6	X-3679-299-1	■ KNOB, VOLUME ASSY
7	X-3679-300-1	s KNOB ASSY
8	X-3679-301-1	s KNOB, VOLUME ASSY
9	1-563-944-11	■ CONNECTOR, 10P MALE "REMOTE"
10	1-801-794-11	s LCD MODULE
11	2-141-006-01	○ GUARD (SQUARE 6), SWITCH
12	2-249-303-00	○ WINDOW (2), REMOTE CONTROL
13	2-249-304-02	○ FRAME(2), WINDOW, REMOTE CONTROL
14	2-249-353-00	s COVER, LAMP
15	2-270-659-00	■ MARKER (B)
16	2-270-660-00	s MARKER (R)
17	2-284-901-00	s MARKER (G)
18	3-509-138-00	■ CLAMP, SPRING
19	3-608-391-02	s SWITCH, RUBBER
20	3-608-402-21	○ SPACER
21	3-708-895-01	s CAP
22	3-708-895-61	s CAP "R"
23	3-708-895-71	s CAP "G"
24	3-708-895-81	s CAP "B"
25	3-708-933-11	s CAP "CALL" (RED)
26	3-708-937-11	■ CAP "SEQ"
27	3-708-937-21	s CAP "ENC"
28	3-708-938-01	s CAP (RED)
29	3-708-939-01	■ CAP (GREEN)
30	3-708-940-01	■ CAP (ORANGE)
31	4-937-336-21	○ HOLDER, LED

{CPU-245 BOARD}

Ref. No. or Q'ty	Part No.	SP Description
R18	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R19	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R20	1-208-810-11	s METAL, CHIP 15K 0.50% 1/10W
R21	1-208-806-11	s METAL, CHIP 10K 0.50% 1/10W
R22	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R23	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R24	1-208-794-11	s METAL, CHIP 3.3K 0.50% 1/10W
R25	1-216-049-91	s METAL, CHIP 1K 5% 1/10W
R26	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R27	1-216-121-91	s METAL, CHIP 1M 5% 1/10W
R28	1-216-049-91	s METAL, CHIP 1K 5% 1/10W
R29	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R30	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R31	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R32	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R33	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R34	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R35	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R36	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R37	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R38	1-216-049-91	s METAL, CHIP 1K 5% 1/10W
R39	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R41	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R42	1-208-794-11	s METAL, CHIP 3.3K 0.50% 1/10W
R43	1-216-049-91	s METAL, CHIP 1K 5% 1/10W
R44	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R46	1-216-295-00	s METAL, CHIP 0 5% 1/10W
R47	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R48	1-208-806-11	s METAL, CHIP 10K 0.50% 1/10W
R49	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R50	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R51	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R52	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R53	1-208-806-11	s METAL, CHIP 10K 0.50% 1/10W
R54	1-208-806-11	s METAL, CHIP 10K 0.50% 1/10W
RB1	1-239-309-11	s RESISTOR BLOCK, CHIP 100K
RB2	1-239-309-11	s RESISTOR BLOCK, CHIP 100K
RB3	1-239-309-11	s RESISTOR BLOCK, CHIP 100K
RB4	1-239-309-11	s RESISTOR BLOCK, CHIP 100K
RB5	1-239-308-11	s RESISTOR ARRAY, CHIP 47K
RB6	1-239-308-11	s RESISTOR ARRAY, CHIP 47K
RV1	1-237-033-11	s RES, ADJ, METAL 1K
S2	1-692-270-41	s SWITCH, SLIDE
S3	1-692-270-41	s SWITCH, SLIDE
X1	1-760-273-11	s VIBRATOR, CRYSTAL 20.0MHz

CT-192 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	3-708-895-01	■ CAP
1pc	3-708-895-61	■ CAP "R"
1pc	3-708-895-71	■ CAP "G"
1pc	3-708-895-81	s CAP "B"
1pc	3-708-933-11	■ CAP "CALL" (RED)
1pc	3-708-937-11	■ CAP "SEQ"
1pc	3-708-937-21	■ CAP "ENC"
1pc	3-708-938-01	s CAP (RED)
1pc	3-708-939-01	s CAP (GREEN)
1pc	3-708-940-01	s CAP (ORANGE)
C1	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C2	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C3	1-113-642-11	s TANTALUM 47uF 20% 10V
C4	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C5	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C6	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C7	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C8	1-126-396-11	■ ELECT, CHIP 47uF 20% 16V
C9	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C11	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C12	1-104-851-11	■ TANTALUM, CHIP 10uF 20% 10V
C13	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C14	1-163-038-91	s CERAMIC 0.1uF 25V
C15	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C16	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C17	1-163-038-91	s CERAMIC 0.1uF 25V
C18	1-104-914-11	s TANTALUM 22uF 20% 16V
C19	1-104-914-11	s TANTALUM 22uF 20% 16V
C20	1-104-914-11	s TANTALUM 22uF 20% 16V
C21	1-128-391-11	s ELECT 330uF 20% 6.3V
C101	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C102	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C103	1-113-642-11	■ TANTALUM 47uF 20% 10V
C104	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C105	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C106	1-164-232-11	■ CERAMIC, CHIP 0.01uF 10% 50V
C107	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 50V
C108	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C109	1-164-232-11	■ CERAMIC, CHIP 0.01uF 10% 50V
C111	1-164-232-11	■ CERAMIC, CHIP 0.01uF 10% 50V
C112	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C113	1-104-851-11	s TANTALUM, CHIP 10uF 20% 10V
C114	1-104-914-11	s TANTALUM 22uF 20% 16V
C115	1-104-914-11	s TANTALUM 22uF 20% 16V
C116	1-128-391-11	s ELECT 330uF 20% 6.3V
CN1	1-580-723-11	s CONNECTOR, BB 28P, FEMALE
CN2	1-566-765-11	o PIN, CONNECTOR 10P, MALE
CN3	1-566-763-11	■ PIN, CONNECTOR 8P, MALE
CN4	1-506-467-11	s CONNECTOR, 2P, MALE
D1	8-719-801-78	s DIODE 1SS184
D2	8-719-801-78	■ DIODE 1SS184
D3	8-719-801-78	■ DIODE 1SS184
D4	8-719-801-78	s DIODE 1SS184
D5	8-719-801-78	s DIODE 1SS184
D6	8-719-801-78	s DIODE 1SS184
D7	8-719-801-78	s DIODE 1SS184
D8	8-719-801-78	s DIODE 1SS184
D9	8-719-948-06	■ DIODE LB-202ML
D10	8-719-948-06	s DIODE LB-202ML

## (CT-192 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
D11	8-719-948-06	s DIODE LB-202ML
D12	8-719-981-49	■ DIODE GL3ED8
D13	8-719-981-49	■ DIODE GL3ED8
D14	8-719-981-49	s DIODE GL3ED8
D15	8-719-981-49	■ DIODE GL3ED8
D16	8-719-981-49	s DIODE GL3ED8
D17	8-719-981-49	s DIODE GL3ED8
D101	8-719-801-78	s DIODE 1SS184
D102	8-719-801-78	s DIODE 1SS184
D103	8-719-801-78	■ DIODE 1SS184
D104	8-719-801-78	■ DIODE 1SS184
D105	8-719-801-78	s DIODE 1SS184
D107	8-719-801-78	s DIODE 1SS184
D108	8-719-970-07	s DIODE MPG3371X-150
D109	8-719-970-07	s DIODE MPG3371X-150
D110	8-719-948-06	■ DIODE LB-202ML
D111	8-719-948-06	■ DIODE LB-202ML
D112	8-719-948-06	■ DIODE LB-202ML
IC2	8-759-925-74	s IC SN74HC04ANS
IC4	8-759-268-29	s IC SN74HC595ANS
IC5	8-759-268-29	■ IC SN74HC595ANS
IC6	8-759-268-29	■ IC SN74HC595ANS
IC7	8-759-268-29	s IC SN74HC595ANS
IC102	8-759-925-74	s IC SN74HC04ANS
IC104	8-759-268-29	■ IC SN74HC595ANS
IC105	8-759-268-29	■ IC SN74HC595ANS
IC106	8-759-268-29	■ IC SN74HC595ANS
L1	1-410-381-11	s INDUCTOR CHIP 10uH
L2	1-410-381-11	s INDUCTOR CHIP 10uH
L4	1-410-381-11	s INDUCTOR CHIP 10uH
L5	1-410-381-11	■ INDUCTOR CHIP 10uH
L6	1-410-381-11	s INDUCTOR CHIP 10uH
L7	1-410-381-11	■ INDUCTOR CHIP 10uH
L8	1-410-381-11	s INDUCTOR CHIP 10uH
L101	1-410-381-11	■ INDUCTOR CHIP 10uH
L103	1-410-381-11	s INDUCTOR CHIP 10uH
L104	1-410-381-11	s INDUCTOR CHIP 10uH
L105	1-410-381-11	s INDUCTOR CHIP 10uH
L106	1-410-381-11	s INDUCTOR CHIP 10uH
Q1	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q2	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q3	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q4	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q5	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q6	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q7	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q8	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q9	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q10	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q11	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q12	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q13	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q14	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q16	8-729-900-52	■ TRANSISTOR DTC114YK
Q17	8-729-900-52	■ TRANSISTOR DTC114YK
Q18	8-729-900-52	s TRANSISTOR DTC114YK
Q19	8-729-900-52	■ TRANSISTOR DTC114YK
Q20	8-729-900-52	s TRANSISTOR DTC114YK

## (CT-192 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q21	8-729-900-52	s TRANSISTOR DTC114YK
Q22	8-729-900-52	■ TRANSISTOR DTC114YK
Q23	8-729-900-52	■ TRANSISTOR DTC114YK
Q24	8-729-900-52	s TRANSISTOR DTC114YK
Q25	8-729-900-52	■ TRANSISTOR DTC114YK
Q26	8-729-900-52	s TRANSISTOR DTC114YK
Q27	8-729-900-52	s TRANSISTOR DTC114YK
Q28	8-729-900-52	s TRANSISTOR DTC114YK
Q29	8-729-900-52	s TRANSISTOR DTC114YK
Q30	8-729-216-22	■ TRANSISTOR 2SA1162
Q31	8-729-900-52	■ TRANSISTOR DTC114YK
Q32	8-729-900-52	s TRANSISTOR DTC114YK
Q33	8-729-900-52	s TRANSISTOR DTC114YK
Q34	8-729-900-52	s TRANSISTOR DTC114YK
Q35	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q36	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q37	8-729-807-51	■ TRANSISTOR 2SD1623-S
Q101	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q102	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q103	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q104	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q105	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q106	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q107	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q108	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q109	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q110	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q111	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q112	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q113	8-729-159-65	■ TRANSISTOR 2SD596-DV5
Q114	8-729-159-65	s TRANSISTOR 2SD596-DV5
Q115	8-729-900-52	s TRANSISTOR DTC114YK
Q116	8-729-900-52	s TRANSISTOR DTC114YK
Q117	8-729-900-52	s TRANSISTOR DTC114YK
Q118	8-729-900-52	s TRANSISTOR DTC114YK
Q119	8-729-900-52	■ TRANSISTOR DTC114YK
Q120	8-729-900-52	■ TRANSISTOR DTC114YK
Q121	8-729-900-52	s TRANSISTOR DTC114YK
Q122	8-729-900-52	s TRANSISTOR DTC114YK
Q123	8-729-900-52	■ TRANSISTOR DTC114YK
Q125	8-729-900-52	s TRANSISTOR DTC114YK
Q127	8-729-900-52	■ TRANSISTOR DTC114YK
Q128	8-729-900-52	■ TRANSISTOR DTC114YK
Q129	8-729-900-52	s TRANSISTOR DTC114YK
R1	1-216-049-91	■ METAL, CHIP1K 5% 1/10W
R2	1-216-121-91	s METAL, CHIP1M 5% 1/10W
R3	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R4	1-216-085-00	■ METAL, CHIP 33K 5% 1/10W
R5	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R6	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R7	1-216-097-91	■ METAL, CHIP 100K 5% 1/10W
R8	1-216-097-91	■ METAL, CHIP 100K 5% 1/10W
R9	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R10	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R11	1-216-097-91	■ METAL, CHIP 100K 5% 1/10W
R12	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R13	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R14	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R15	1-216-073-00	s METAL, CHIP 10K 5% 1/10W

Ref. No. or Q'ty	Part No.	SP Description
R16	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R17	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R18	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R19	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R20	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R21	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R22	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R23	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R24	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R25	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R26	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R27	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R28	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R29	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R30	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R31	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R32	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R33	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R34	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R35	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R36	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R37	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R38	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R39	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R40	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R41	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R42	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R43	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R44	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R45	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R46	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R47	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R48	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R49	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R50	1-216-041-00	■ METAL, CHIP 470 5% 1/10W
R51	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R52	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R54	1-216-017-91	■ METAL, CHIP 47 5% 1/10W
R55	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R56	1-216-023-00	■ METAL, CHIP 82 5% 1/10W
R57	1-216-017-91	s METAL, CHIP 47 5% 1/10W
R58	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R59	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R60	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R61	1-216-031-00	s METAL, CHIP 180 5% 1/10W
R62	1-216-031-00	s METAL, CHIP 180 5% 1/10W
R63	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R64	1-216-023-00	■ METAL, CHIP 82 5% 1/10W
R65	1-216-023-00	■ METAL, CHIP 82 5% 1/10W
R66	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R67	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R68	1-216-049-91	s METAL, CHIP 1K 5% 1/10W
R69	1-216-077-00	■ METAL, CHIP 15K 5% 1/10W
R70	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R71	1-216-055-00	s METAL, CHIP 1.8K 5% 1/10W
R72	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R73	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R74	1-216-023-00	■ METAL, CHIP 82 5% 1/10W
R75	1-216-023-00	s METAL, CHIP 82 5% 1/10W

Ref. No. or Q'ty	Part No.	SP Description
R76	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R77	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R78	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R79	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R80	1-216-025-91	■ METAL, CHIP 100 5% 1/10W
R81	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R82	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R83	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R84	1-216-025-91	■ METAL, CHIP 100 5% 1/10W
R85	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R86	1-216-025-91	s METAL, CHIP 100 5% 1/10W
R87	1-216-025-91	■ METAL, CHIP 100 5% 1/10W
R88	1-216-025-91	■ METAL, CHIP 100 5% 1/10W
R89	1-216-025-91	■ METAL, CHIP 100 5% 1/10W
R90	1-216-025-91	■ METAL, CHIP 100 5% 1/10W
R91	1-216-001-00	s METAL, CHIP 10 5% 1/10W
R92	1-216-001-00	s METAL, CHIP 10 5% 1/10W
R93	1-216-001-00	■ METAL, CHIP 10 5% 1/10W
R94	1-216-001-00	s METAL, CHIP 10 5% 1/10W
R101	1-216-049-91	■ METAL, CHIP 1K 5% 1/10W
R102	1-216-121-91	■ METAL, CHIP 1M 5% 1/10W
R103	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R104	1-216-085-00	■ METAL, CHIP 33K 5% 1/10W
R105	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R106	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R107	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R108	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R109	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R110	1-216-097-91	■ METAL, CHIP 100K 5% 1/10W
R111	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R112	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R113	1-216-097-91	s METAL, CHIP 100K 5% 1/10W
R114	1-216-097-91	■ METAL, CHIP 100K 5% 1/10W
R115	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R116	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R117	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R118	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R119	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R120	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R121	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R122	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R123	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R124	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R125	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R126	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R127	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R128	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R129	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R130	1-216-073-00	■ METAL, CHIP 10K 5% 1/10W
R131	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R132	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R133	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R134	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R135	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R136	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R137	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R138	1-216-061-00	■ METAL, CHIP 3.3K 5% 1/10W
R139	1-216-013-00	s METAL, CHIP 33 5% 1/10W
R140	1-216-013-00	s METAL, CHIP 33 5% 1/10W



## (CT-192 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R141	1-216-013-00 s	METAL, CHIP 33 5% 1/10W
R142	1-216-013-00 ■	METAL, CHIP 33 5% 1/10W
R143	1-216-013-00 s	METAL, CHIP 33 5% 1/10W
R144	1-216-013-00 ■	METAL, CHIP 33 5% 1/10W
R145	1-216-013-00 s	METAL, CHIP 33 5% 1/10W
R146	1-216-013-00 s	METAL, CHIP 33 5% 1/10W
R147	1-216-041-00 s	METAL, CHIP 470 5% 1/10W
R148	1-216-041-00 s	METAL, CHIP 470 5% 1/10W
R149	1-216-041-00 ■	METAL, CHIP 470 5% 1/10W
R150	1-216-041-00 s	METAL, CHIP 470 5% 1/10W
R151	1-216-041-00 s	METAL, CHIP 470 5% 1/10W
R152	1-216-041-00 s	METAL, CHIP 470 5% 1/10W
R153	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R154	1-216-023-00 ■	METAL, CHIP 82 5% 1/10W
R155	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R156	1-216-023-00 ■	METAL, CHIP 82 5% 1/10W
R157	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R158	1-216-023-00 ■	METAL, CHIP 82 5% 1/10W
R159	1-216-023-00 ■	METAL, CHIP 82 5% 1/10W
R160	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R161	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R163	1-216-025-91 s	METAL, CHIP 100 5% 1/10W
R165	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R166	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
R167	1-216-023-00 s	METAL, CHIP 82 5% 1/10W
RV1	1-238-255-21 s	RES, VAR, CARBON 10K
RV2	1-238-255-21 s	RES, VAR, CARBON 10K
RV3	1-238-255-21 s	RES, VAR, CARBON 10K
RV4	1-238-255-21 s	RES, VAR, CARBON 10K
S1	1-475-218-11 ■	ENCODER, ROTARY
S2	1-475-218-11 s	ENCODER, ROTARY
S3	1-475-218-11 ■	ENCODER, ROTARY
S4	1-475-218-11 s	ENCODER, ROTARY
S5	1-475-218-11 s	ENCODER, ROTARY
S6	1-475-218-11 s	ENCODER, ROTARY
S8	1-762-138-11 s	SWITCH, PUSH
S9	1-762-139-11 s	SWITCH, PUSH
S10	1-762-139-11 s	SWITCH, PUSH
S11	1-762-138-11 s	SWITCH, PUSH
S12	1-762-042-11 s	SWITCH, PUSH
S13	1-762-042-11 s	SWITCH, PUSH
S14	1-762-042-11 s	SWITCH, PUSH
S15	1-762-137-11 s	SWITCH, PUSH
S16	1-762-137-11 s	SWITCH, PUSH
S17	1-762-042-71 s	SWITCH, PUSH
S18	1-762-042-81 s	SWITCH, PUSH
S19	1-762-042-91 s	SWITCH, PUSH
S20	1-762-136-21 s	SWITCH, PUSH
S21	1-762-136-31 s	SWITCH, PUSH
S22	1-771-110-11 ■	SWITCH, ROTARY
S101	1-475-218-11 s	ENCODER, ROTARY
S102	1-475-218-11 s	ENCODER, ROTARY
S103	1-475-218-11 s	ENCODER, ROTARY
S104	1-475-218-11 s	ENCODER, ROTARY
S105	1-475-218-11 s	ENCODER, ROTARY
S106	1-475-218-11 s	ENCODER, ROTARY
S107	1-475-218-11 s	ENCODER, ROTARY
S108	1-762-042-11 s	SWITCH, PUSH
S109	1-762-042-11 s	SWITCH, PUSH

## SW-890 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-8315-097-A o	MOUNTED CIRCUIT BOARD, SW-890
D201	8-719-801-78 s	DIODE 1SS184
D202	8-719-801-78 ■	DIODE 1SS184
D203	8-719-801-78 s	DIODE 1SS184
D204	8-719-801-78 s	DIODE 1SS184
D205	8-719-801-78 s	DIODE 1SS184
D206	8-719-801-78 ■	DIODE 1SS184
D207	8-719-801-78 ■	DIODE 1SS184
D208	8-719-801-78 s	DIODE 1SS184
D209	8-719-801-78 s	DIODE 1SS184
D210	8-719-801-78 s	DIODE 1SS184
D211	8-719-801-78 s	DIODE 1SS184
D212	8-719-801-78 s	DIODE 1SS184
D213	8-719-801-78 s	DIODE 1SS184
D214	8-719-801-78 ■	DIODE 1SS184
D215	8-719-801-78 s	DIODE 1SS184
D216	8-719-801-78 ■	DIODE 1SS184
D217	8-719-801-78 s	DIODE 1SS184
D218	8-719-801-78 s	DIODE 1SS184
D219	8-719-801-78 s	DIODE 1SS184
D220	8-719-801-78 ■	DIODE 1SS184
S201	1-572-473-11 s	SWITCH, PUSH
S202	1-572-473-11 ■	SWITCH, PUSH
S203	1-572-473-11 s	SWITCH, PUSH
S204	1-572-473-11 ■	SWITCH, PUSH
S205	1-572-473-11 s	SWITCH, PUSH
S206	1-572-473-11 ■	SWITCH, PUSH
S207	1-572-473-11 s	SWITCH, PUSH
S208	1-572-473-11 ■	SWITCH, PUSH
S209	1-572-473-11 s	SWITCH, PUSH
S210	1-572-473-11 s	SWITCH, PUSH
S211	1-572-473-11 s	SWITCH, PUSH
S212	1-572-473-11 s	SWITCH, PUSH
S213	1-572-473-11 s	SWITCH, PUSH
S214	1-572-473-11 s	SWITCH, PUSH
S215	1-572-473-11 s	SWITCH, PUSH
S216	1-572-473-11 s	SWITCH, PUSH
S217	1-572-473-11 s	SWITCH, PUSH
S218	1-572-473-11 s	SWITCH, PUSH
S219	1-572-473-11 s	SWITCH, PUSH
S220	1-572-473-11 s	SWITCH, PUSH
S221	1-572-473-11 s	SWITCH, PUSH
S222	1-572-473-11 ■	SWITCH, PUSH
S223	1-572-473-11 ■	SWITCH, PUSH
S224	1-572-473-11 s	SWITCH, PUSH
S226	1-771-113-11 ■	SWITCH, PUSH
S227	1-771-113-11 ■	SWITCH, PUSH
S228	1-771-113-11 s	SWITCH, PUSH
S229	1-771-113-11 s	SWITCH, PUSH
S230	1-572-473-11 s	SWITCH, PUSH
S231	1-572-473-11 ■	SWITCH, PUSH
S232	1-572-473-11 s	SWITCH, PUSH
S233	1-572-473-11 s	SWITCH, PUSH
S234	1-572-473-11 s	SWITCH, PUSH
S235	1-572-473-11 s	SWITCH, PUSH
S236	1-572-473-11 s	SWITCH, PUSH

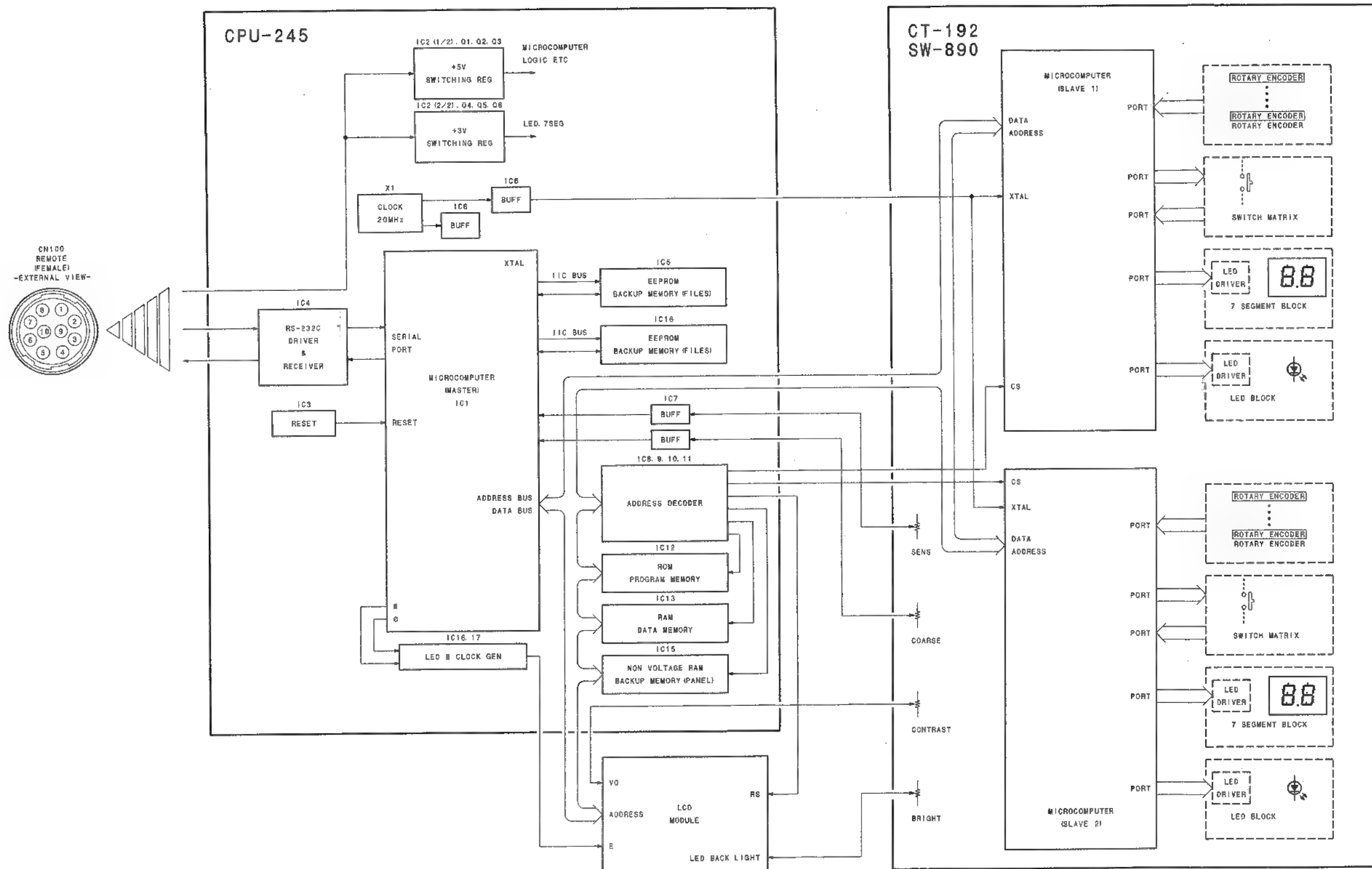
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 FRAME  
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Ref. No. or Q'ty	Part No.	SP Description
1pc	1-801-794-11	s LCD MODULE
CN100	1-563-944-11	s CONNECTOR, 10P MALE "REMOTE"
TO CN1/CPU-245 BOARD		
	1-569-201-11	o HOUSING, 8P
	1-569-193-11	o CONTACT, AWG24-30
TO CN3/CT-192 BOARD		
	1-569-195-11	o HOUSING, CONNECTOR 2P
	1-569-193-11	o CONTACT, AWG24-30
TO CN4/CPU-245 BOARD		
	1-569-207-11	o HOUSING, 14P
	1-569-193-11	o CONTACT, AWG24-30
TO W24/LCD MODULE		
	1-562-747-11	o HOUSING, 14P
	1-564-831-11	o CONTACT, FEMALE

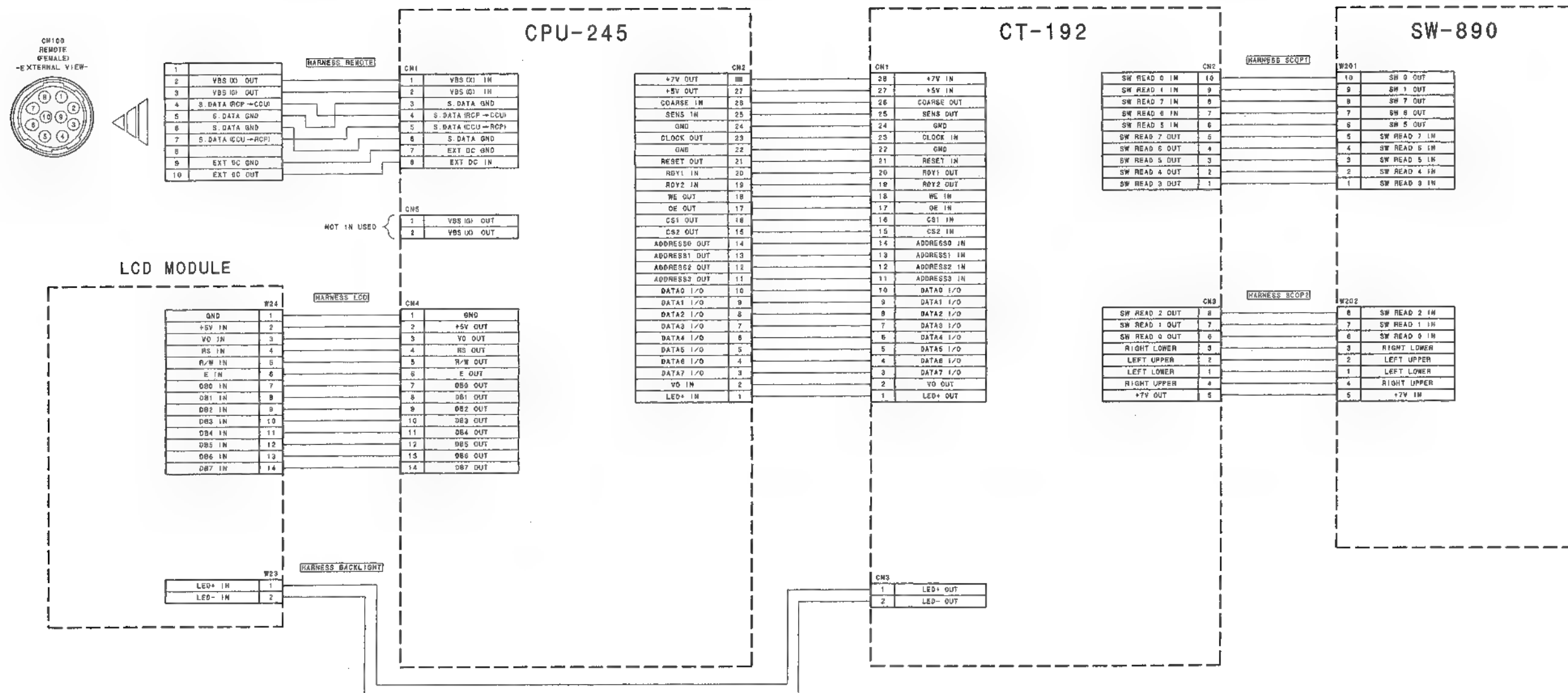
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 SUPPLIED ACCESSORIES  
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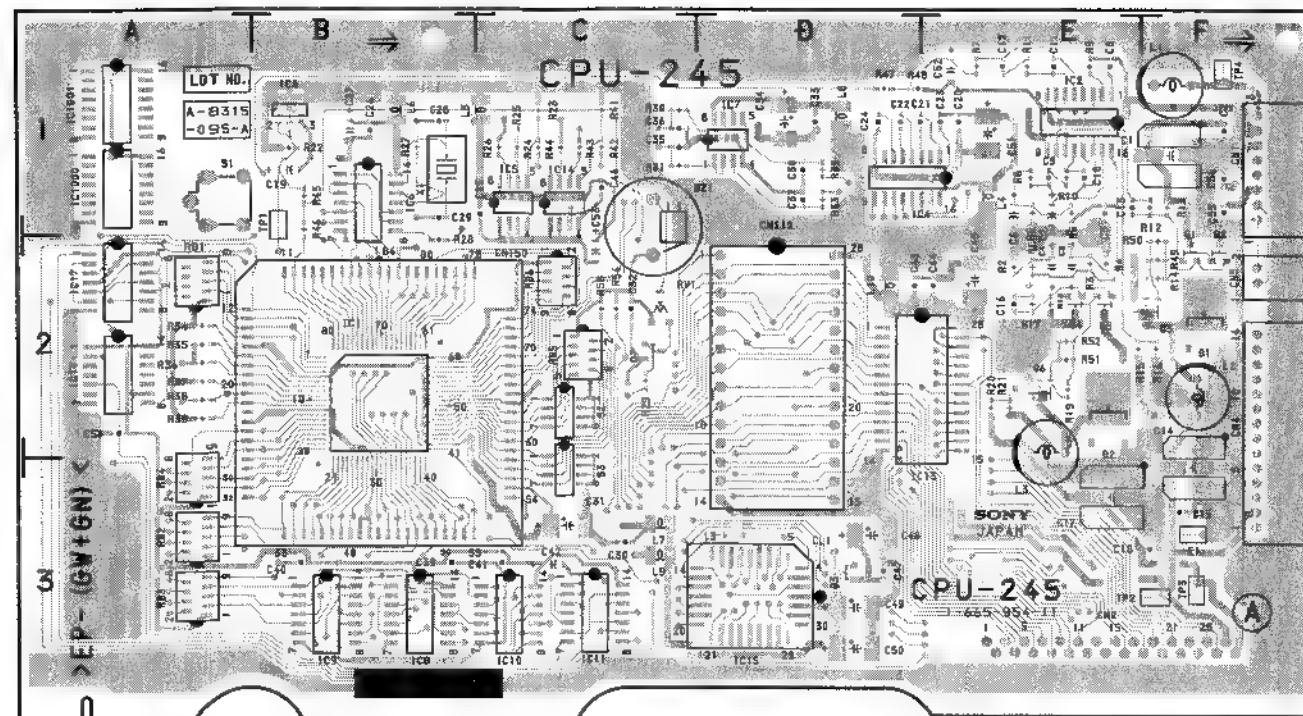
Ref. No. or Q'ty	Part No.	SP Description
1pc	1-574-141-21	s CABLE ASSY
1pc	2-249-307-00	s INDICATOR, REMOTE
2pcs	3-703-225-00	s WASHER (4 DIA.), ORNAMENTAL
1pc	3-859-859-01	■ MANUAL, INSTRUCTION (JAPANESE)
1pc	3-859-859-11	s MANUAL, INSTRUCTION (ENGLISH)
1pc	3-859-859-21	■ MANUAL, INSTRUCTION (FRENCH)
1pc	3-859-859-31	■ MANUAL, INSTRUCTION (GERMAN)
1pc	3-859-859-41	s MANUAL, INSTRUCTION (ITALIAN)
1pc	3-859-859-51	■ MANUAL, INSTRUCTION (CHINESE)
1pcs	7-682-361-04	s SCREW +RK 4X8

# SECTION 6 BLOCK DIAGRAM

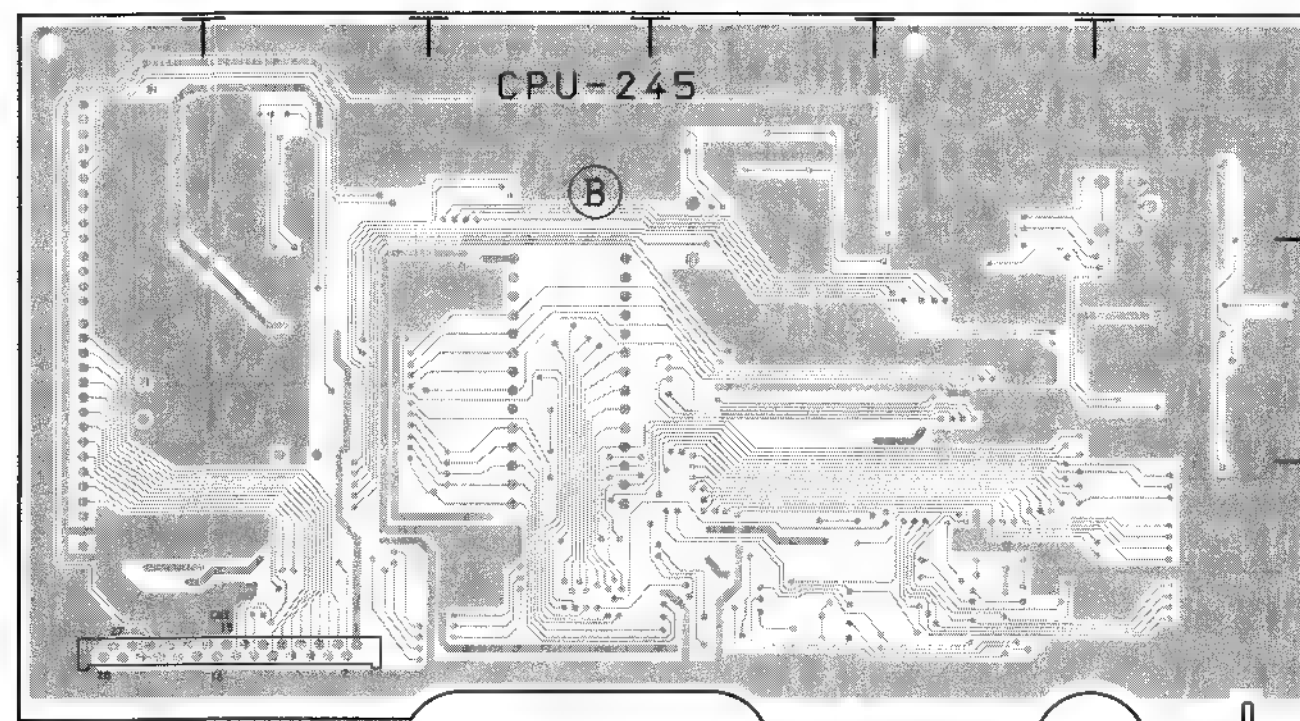


# SECTION 7 SCHEMATIC DIAGRAMS AND BOARD ILLUSTRATIONS





**CPU-245 -A SIDE-**  
1-665-954-11



**CPU-245 -B SIDE-**  
1-665-954-11

\*: B SIDE

BZ1 C1

CNI12 D2

CN1 F1

\*CN2 E3

CN4 F3

CN5 F2

D1 F2

D2 E2

D3 D3

E1 F3

IC1 B2

IC2 E1

IC3 B1

IC4 D1

IC5 C1

IC6 B1

IC7 D1

IC8 B3

IC9 B3

IC10 C3

IC11 C3

IC12 D2

IC13 E2

IC14 C1

IC15 D3

IC16 A2

IC17 A2

L1 F1

L2 F2

L3 E2

L4 E1

L5 C1

L6 B1

L7 C3

L8 D1

L9 C3

L10 D2

Q1 F2

Q2 F2

Q3 F2

Q4 E2

Q5 E2

Q6 E2

Q7 C2

RB1 A2

RB2 A3

RB3 A3

RB4 A3

RB5 C2

RB6 C2

RV1 C2

S2 C2

S3 C3

TP1 B1

TP2 F3

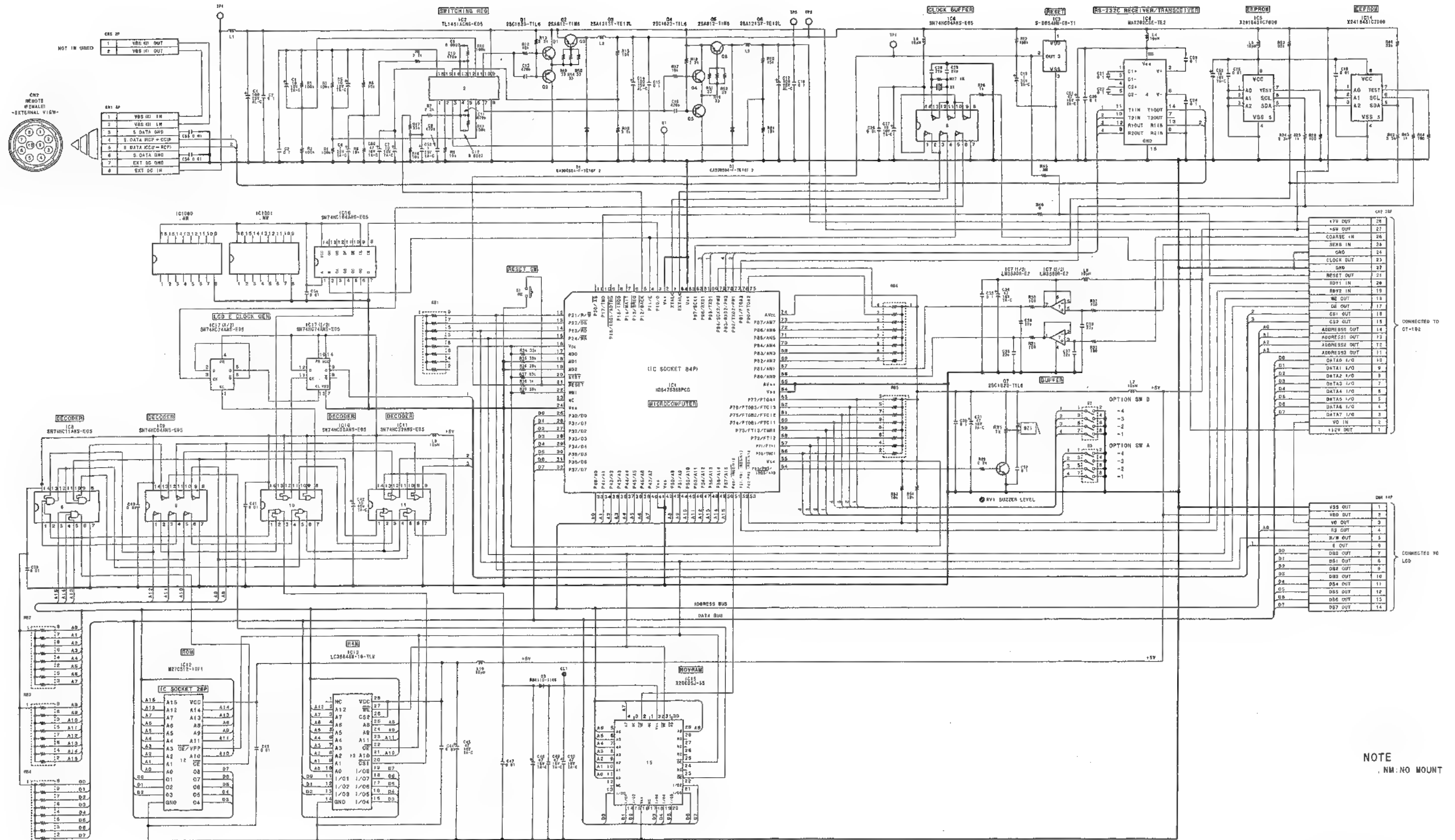
TP3 F3

TP4 F1

X1 B1

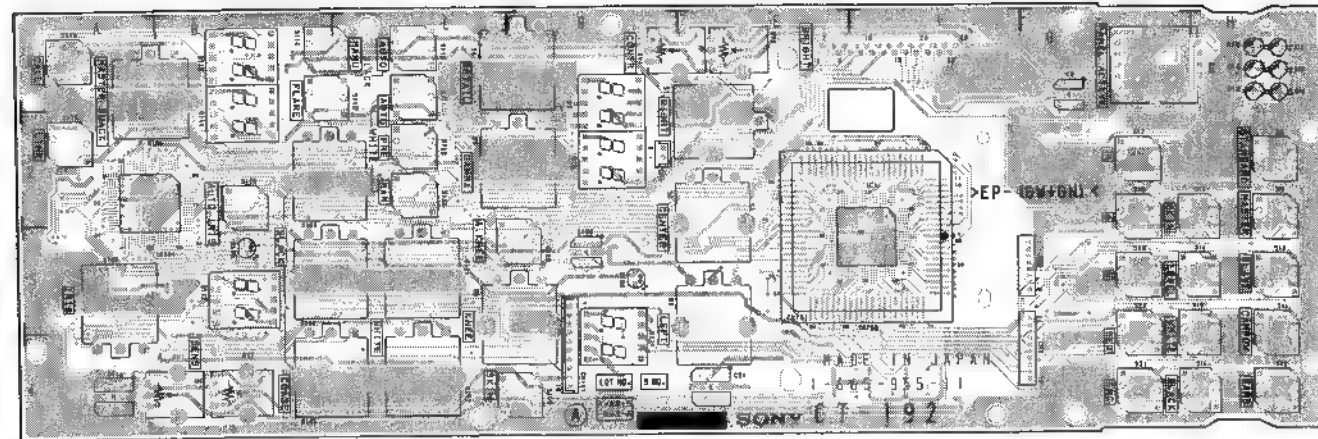


## CPU-245 CPU-245

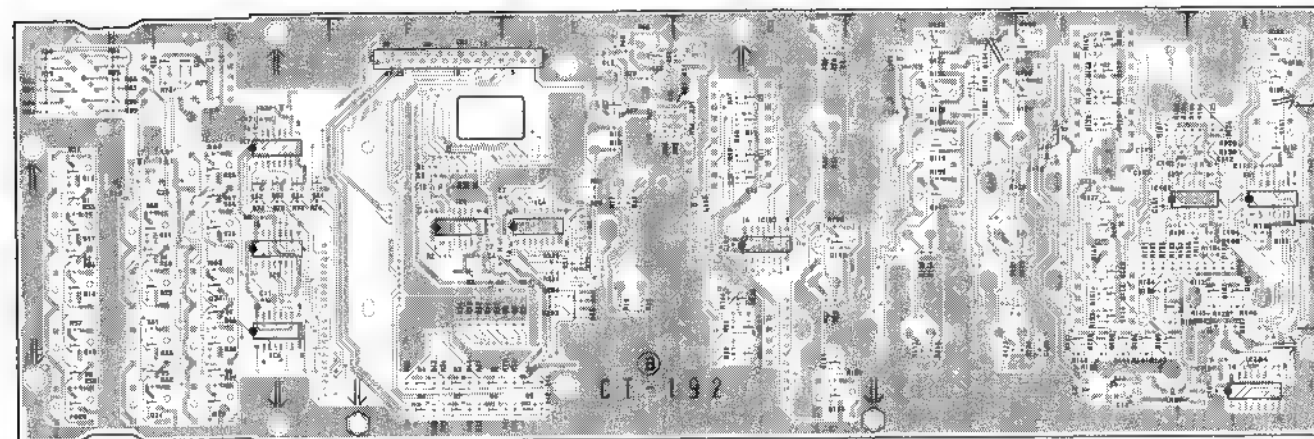


NOTE  
NM:NO MOUNT

**CPU-245**  
B-RCPTX7-CPU245/M



CT-192 -A SIDE-  
1-665-955-11

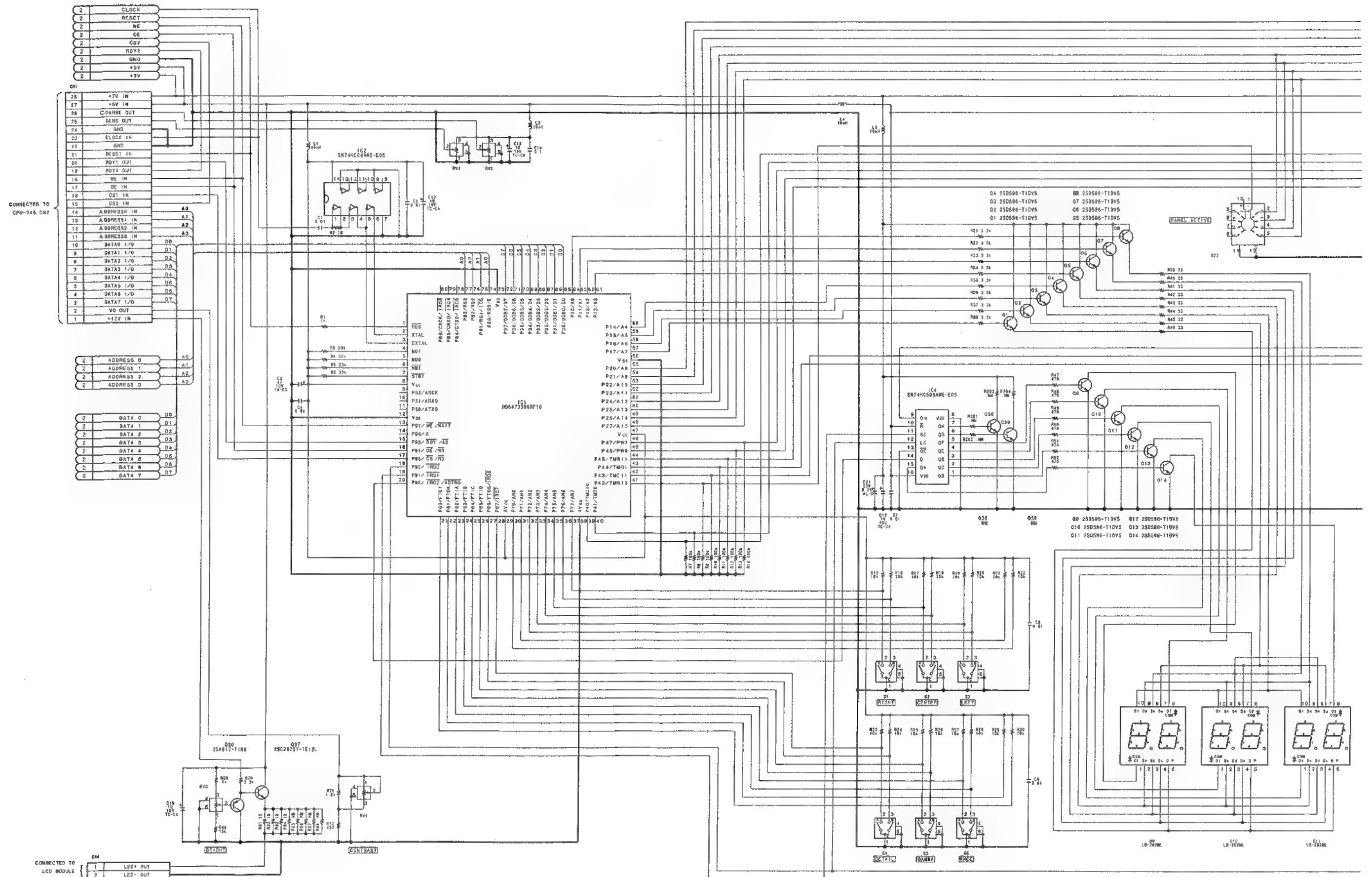


CT-192 -B SIDE-  
1-665-955-11

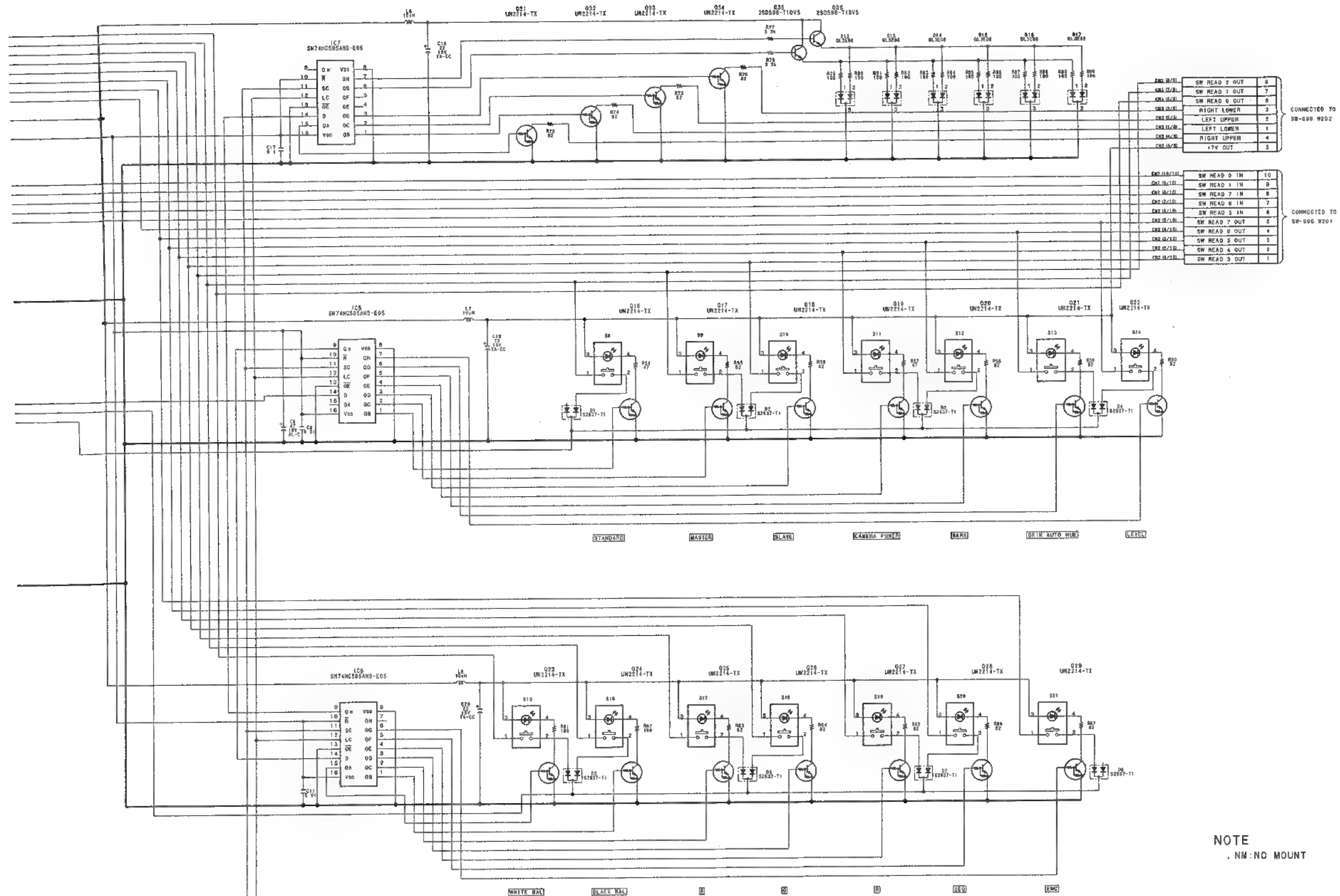
\*: B SIDE

*CN1	E1	D109	B3	*L106	B2	*Q28	G4	*Q119	C2	S15	H4
CN2	G3	D110	B1			*Q29	G4	*Q120	B1	S16	H4
CN3	G3	D111	B1	*Q1	B4	*Q30	E1	*Q121	B1	S17	G2
CN101	D3	D112	B3	*Q2	F4	*Q31	G2	*Q122	C1	S18	G2
				*Q3	F4	*Q32	G2	*Q123	A2	S19	G3
*D1	H2	IC1	F3	*Q4	F4	*Q33	G2	*Q125	A1	S20	G4
*D2	H3	*IC2	F2	*Q5	F4	*Q34	G2	*Q127	B2	S21	G4
*D3	H4	*IC4	E2	*Q6	F4	*Q35	G1	*Q128	D3	S22	G1
*D4	H3	*IC5	G3	*Q7	F4	*Q36	G1	*Q129	B3	S101	C3
*D6	G2	*IC6	G3	*Q8	F4	*Q37	E1			S102	C4
*D7	G3	*IC7	G2	*Q9	D1	*Q101	A3	RV1	B4	S103	B2
*D8	G4	IC101	A2	*Q10	D2	*Q102	A3	RV2	B4	S104	B3
D9	D1	*IC102	A2	*Q11	D2	*Q103	B4	RV3	E1	S105	B4
D10	D2	*IC104	A4	*Q12	D2	*Q104	B3	RV4	E1	S106	A1
D11	D3	*IC105	D3	*Q13	D3	*Q105	B4			S107	A3
D12	H1	*IC106	A2	*Q14	D4	*Q106	B4	S1	E2	S108	D3
D13	H1			*Q16	H2	*Q107	B4	S2	E3	S109	D4
D14	H1	*L1	F3	*Q17	H2	*Q108	B4	S3	E3	S110	C2
D15	H1	*L2	B4	*Q18	H3	*Q109	B1	S4	D1	S111	C1
D16	H1	*L4	G1	*Q19	H4	*Q110	B1	S5	D2	S112	C2
D17	H1	*L5	E3	*Q20	H4	*Q111	B1	S6	D3	S113	B1
D101	D4	*L6	G1	*Q21	H2	*Q112	B2	S8	H2	S114	B1
*D102	C2	*L7	H2	*Q22	H3	*Q113	B3	S9	H2	S115	C1
*D103	C1	*L8	G2	*Q23	H4	*Q114	B3	S10	H3	S116	A2
*D104	C1	*L101	B2	*Q24	H4	*Q115	D3	S11	H4	S118	A1
*D105	A1	*L103	D2	*Q25	G2	*Q116	D4	S12	H4	S120	B2
*D107	B3	*L104	B4	*Q26	G2	*Q117	C2	S13	H2		
D108	D3	*L105	C1	*Q27	G3	*Q118	C1	S14	H3		





CT-192 (1/2) CT-192 (1/2)



NOTE  
NM:NO MOUNT

**CT-192 (1/2)**  
B-ACPTX7-CT192/M



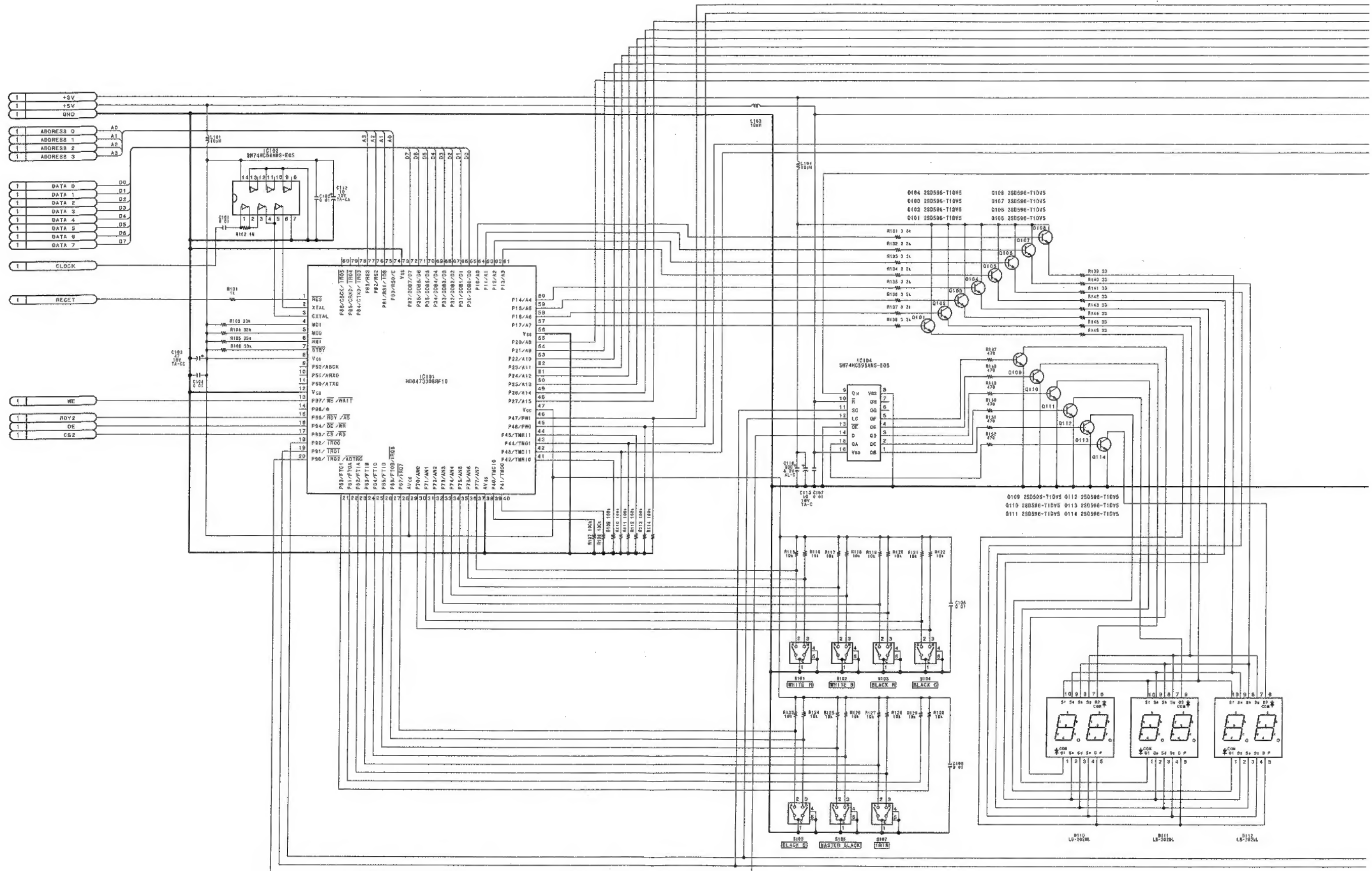
1

2

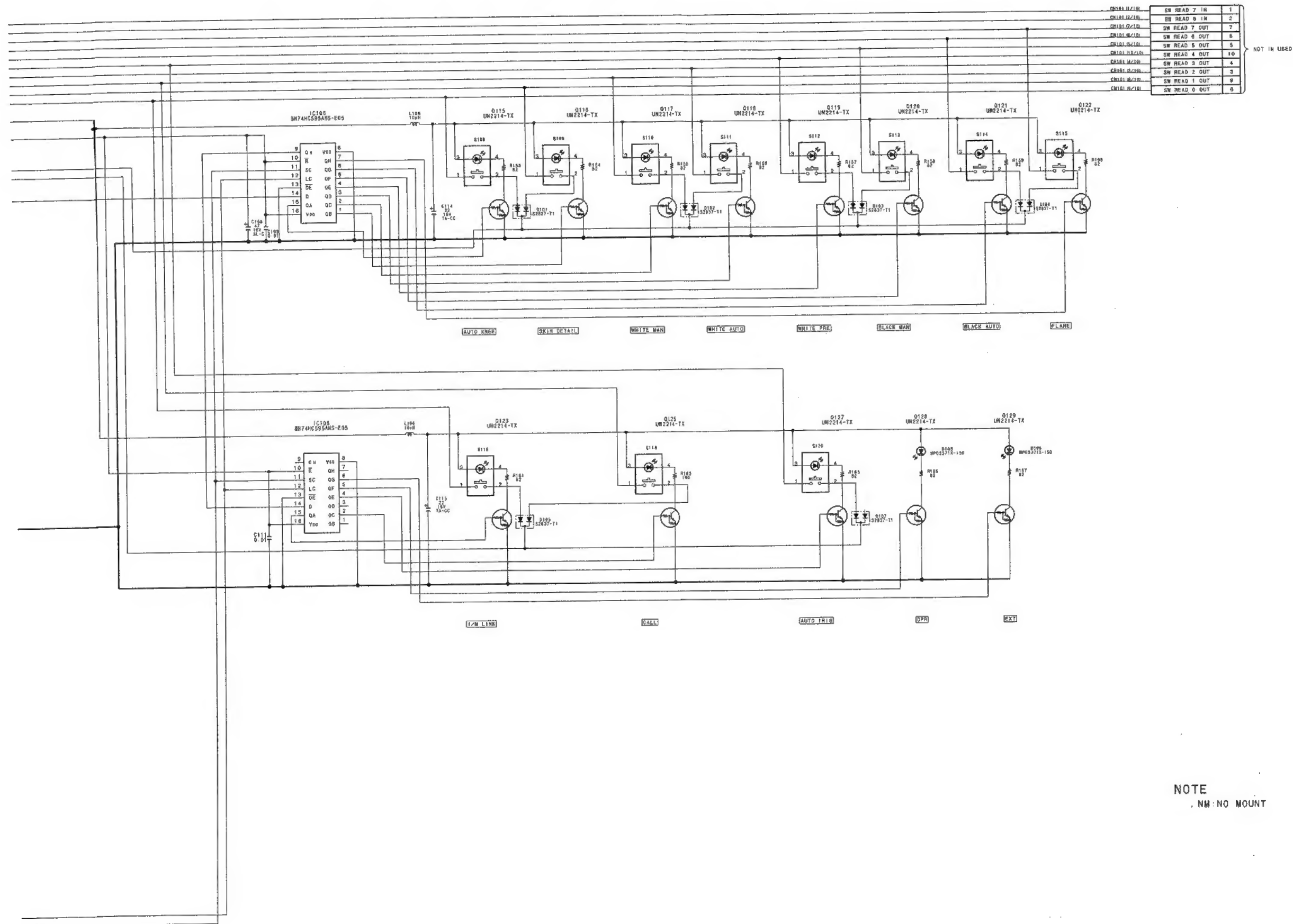
3

4

5

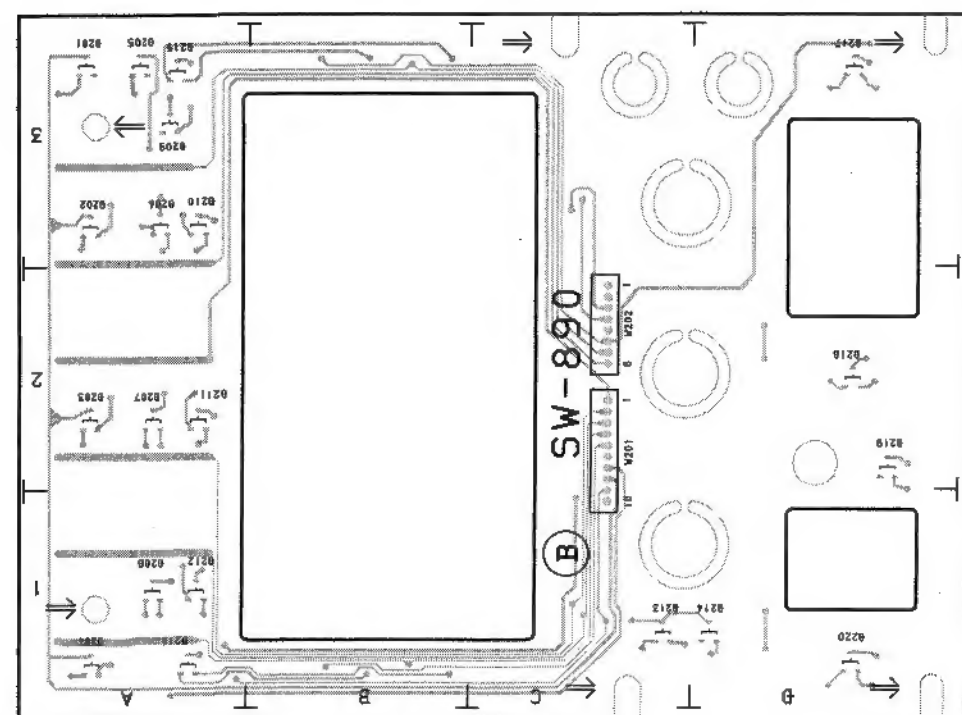
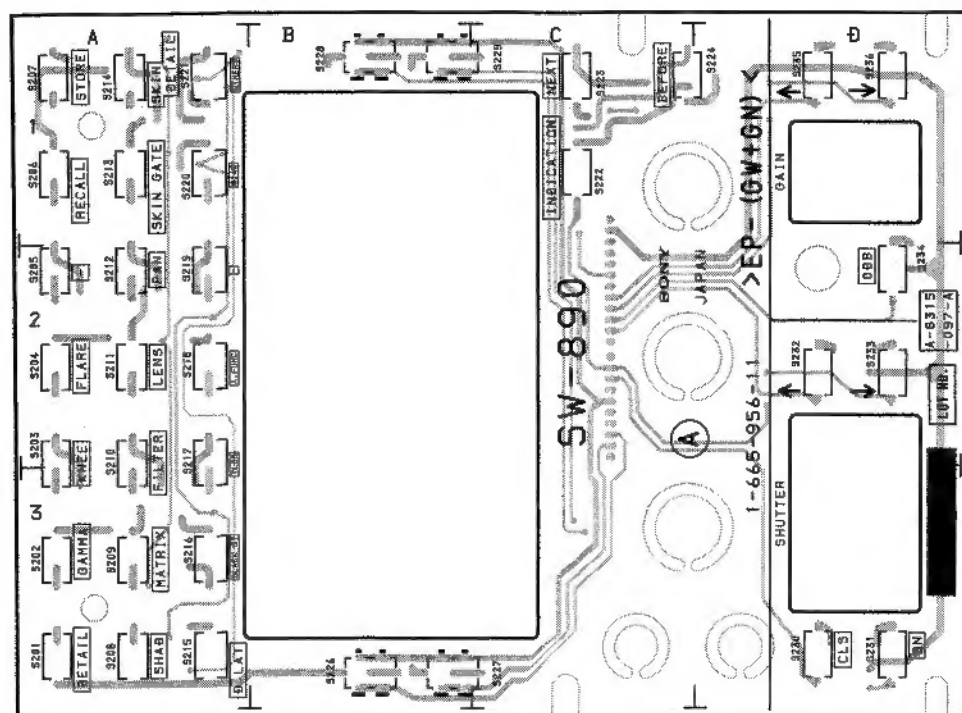


# CT-192 (2/2)    CT-192 (2/2)



NOTE  
NM: NO MOUNT

CT-192 (2/2)  
B-RCPTX7-CT192/M



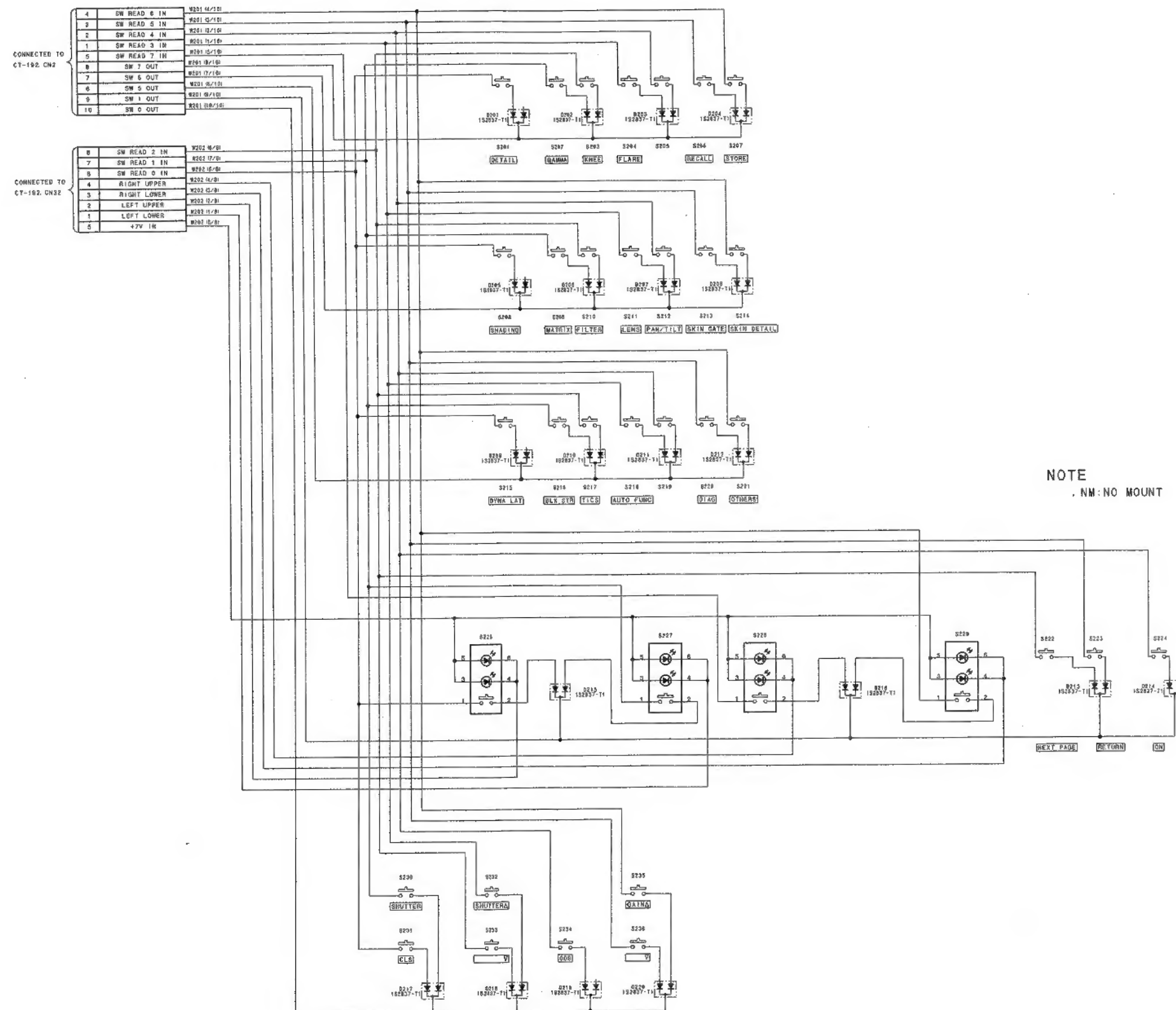
\*: B SIDE

\*D201 A3  
\*D202 A3  
\*D203 A2  
\*D204 A1  
\*D205 A3  
\*D206 A3  
\*D207 A2  
\*D208 A1  
\*D209 A3  
\*D210 A3  
\*D211 A2  
\*D212 A1  
\*D213 C1  
\*D214 D1  
\*D215 A3  
\*D216 A1  
\*D217 D3  
\*D218 D2  
\*D219 D2  
\*D220 D1

S201 A3  
S202 A3  
S203 A2  
S204 A2  
S205 A2  
S206 A1  
S207 A1  
S208 A3  
S209 A3  
S210 A2  
S211 A2  
S212 A2  
S213 A1  
S214 A1  
S215 A3  
S216 A3  
S217 A2  
S218 A2  
S219 A2  
S220 A1  
S221 A1  
S222 C1  
S223 C1  
S224 C1  
S226 B3  
S227 B3  
S228 B1  
S229 B1  
S230 D3  
S231 D3  
S232 D2  
S233 D2  
S234 D2  
S235 D1  
S236 D1

\*W201 C2  
\*W202 C2

# SW-890 SW-890



SW-890  
B-RCPTX7-SW890/M